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ABSTRACT CITATIONS

HS-016 900

OBSERVED RESTRAINT USE OF CHILDREN IN AUTOMOBILES

Visual observations were made on restraint use of occupants of 5,050 cars containing at least one passenger less than ten years of age, and short interviews were conducted with the drivers. Ninety-three percent of such passengers were not restrained. Eighty-nine percent of passengers ten and older, and 78% of the drivers were not restrained. Sixteen percent of child motor vehicle restraint devices observed were not used, and 73% of those in use were not used correctly. Use of such devices dropped sharply after age one. Sixty-nine percent of the children were in rear seating positions. Restraint of drivers and children was correlated, but more than 75% of child passengers were not restrained when the driver was, even if the driver was the child's parent.

by A. F. Williams

Insurance Inst. for Hwy. Safety, Washington, D.C.

1975 ; 37p 42refs

Availability: Corporate author

HS-016 901

BELT USE IN 1975 CARS: INITIAL DATA FROM ONE METROPOLITAN AREA

Seat belt use in the Houston metropolitan area during March, 1975 is assessed. Belt use or nonuse was visually observed at 30 sites, such as freeway entrances and exits, and other points where vehicles ordinarily slow to less than 15 mph. Of 394 observed 1975 cars, 27% were using the lap and shoulder harness combination and an additional 8% were using only the lap belt. This was compared to the findings of a similar survey taken in 1974, which showed 28% using the three point belt and 8% using the lap belt. The overall finding was that, despite the proliferation of buzzers, lights, and interlocks in the interim, observed use of any belt in 1972-1975 cars in 1975 was 29% compared to 23% in 1968-1971 cars.

by L. S. Robertson

Insurance Inst. for Hwy. Safety, Washington, D.C.

1975 ; 9p 12refs

Availability: Corporate author

HS-016 902

FACTORS AFFECTING THE TIMES TILL DEATH OF PEDESTRIANS KILLED IN ROAD ACCIDENTS

Police reports of fatal pedestrian road accidents in London in 1970-71 have been examined, and the times of death extracted. These have been related to estimated speed of impact, age of injured person and type of vehicle. High-impact speed tends to lead to quick death. Age has no statistically significant effect once speed is allowed for, but because a greater proportion of elderly pedestrians are killed by slowly moving vehicles, the elderly on the average die later than the young when all speed groups are combined. Type of vehicle also influences time of

death, with motorcycles giving rise to later deaths and trucks to quicker ones than do cars.

by T. P. Hutchinson

Publ: Injury v6 n3 p208-12 (Feb 1975)

1975 ; 11refs

Availability: See publication

HS-016 903

MANAGING HIGHWAY SAFETY--RECOMMENDATIONS FOR STRENGTHENING HIGHWAY SAFETY MANAGEMENT PRACTICES IN STATES AND LOCALITIES

The current environment of state and local highway safety program management is analyzed, and ways in which the management practices of these programs can be strengthened are defined. Based on these findings, a series of model solutions (organizational and programmatic recommendations) were to be developed for broad application to state and local management practices under current environmental circumstances. Three major organization levels were examined: the state highway safety agency (SHSA), usually headed by the governor's highway safety representative; local highway safety agencies; and the private sector, including non-governmental agencies. Major findings at the state level were that: political support for highway safety is low; state responsibilities for highway safety are decentralized; leadership by state highway safety agencies varies significantly; and planning and evaluation techniques are still in the development stage. At a local level, it was found that: the national highway safety program has had limited impact, primarily in the area of providing specific project funds to sustain and enhance existing local highway safety units; many effective local highway safety units have actually been private sector organizations, such as safety councils; local highway safety management units have, for the most part, a narrow program focus, such as police-traffic services or public information, and are extremely limited in professional capability; at the local level, highway safety is considered a minor problem, in comparison to other problems. Model management solutions at the state level were as follows: the SHSA should be established as a leadership element in the state government, for the purpose of improving safety program political visibility, promoting safety legislation, influencing departmental support and funding, initiating local level efforts, and fostering coordinative private sector activity; the SHSA should establish a state level planning process and be responsible for its coordination; the highway safety agency should interrelate SHSA activities with other departments, fostering project development and program planning at all levels. At the local level there should be a highway safety agency with a full time coordinator, to stress local highway safety.

Peat, Marwick, Mitchell and Co., 1025 Connecticut Ave., N.W. Washington, D.C. 20036

1974 ; 119p

Prepared for the Motor Vehicle Manufacturers Assoc. of the United States, Inc.

Availability: Motor Vehicle Manufacturers Assoc. of the U.S., Inc.

HS-016 904

MERCURY VAPOR SIGN LIGHTING

The practical aspects and considerations for an acceptable sign lighting design using mercury vapor luminaires are reported. Examples of all known potentially suitable luminaires were evaluated, in terms of material, mechanical design, and lighting performance, with a view to the formulation of an acceptable standard mercury vapor lighting design. The characteristics of clear, deluxe, color corrected, and metal halide mercury vapor lamps were compared and the clear lamp recommended. Luminaire height, placement and ballast location are discussed. Specifications for mercury vapor sign lighting were prepared and used to compare seven brands of luminaire. The evaluation was concerned with the physical features and construction, as well as lighting performance. Photometric data was also collected. It was concluded that only three of the seven brands tested were suitable, without major modification. These were the Holophone 0780, the Guth Vertol "Signlighter", and the Infranor Series 35-SL. An alternate luminaire support design to the interim design presently used was developed. The design provides visibility for

oration, mercury Vapor Sign Lighting
1 St., Columbus, Ohio 43215

ite author

HS-016 905

PREDICTIONS OF CUMULATIVE FATIGUE DAMAGE USING CONDENSED LOAD HISTORIES

Several different computerized methods for predicting crack initiation life for irregular loadings were evaluated. Extensive test data was generated for three different irregular load histories, using two different steels and several maximum load levels for each history. To predict crack initiation life, the following items are required in an analysis: a forecast of the loads (or strains) that will be imposed on a component or assembly; knowledge of the stress distribution in a component, including the effect of stress considerations and residual stresses which may be present from the time of manufacture; knowledge of material properties; knowledge of damage rules, which describe the relation between cyclic stress or strain amplitude and the life to initiate a crack of some given length, in this case 0.1 inch; and a method by which an irregular sequence of loads can be converted to a set of quantities to which the damage rules may be applied (cycle counting). The three computerized prediction methods used were the Landgraf, Wetzel, and a Nominal Stress Range. All predictions are based on load histories (a suspension, a bracket, and a transmission) condensed to 10% of their original number of reversals by the "Racetrack (or Ordered Overall Range) method", which is described in detail. This method selects the most damaging overall ranges in an irregular load history while preserving the sequence of the original loading. Predictions are compared with test data for the two dozen combinations of loading type and level and steel used. It was concluded that the use of the Racetrack Method to condense load blocks for

the acceleration of fatigue tests can save computer time required for predictions. Good predictions can be obtained using the Nominal Stress Range 2 Method, which is the simplest, quickest approach of those investigated and is especially well-suited for long life predictions. Good predictions can also be obtained using the Wetzel and Landgraf methods. They are considerably more complicated than the Nominal Stress Range 2 Method and require more computer time. However, both have the ability to try to account for load sequence effects due to residual stresses produced by localized yielding at a notch, which the Nominal method cannot do. The Wetzel method has the advantage of appearing to be less sensitive to variations in cyclic stress-strain properties than the Landgraf method.

by D. V. Nelson; H. O. Fuchs
Stanford Univ.

Rept. No. SAE-750045 ; 1975 ; 27p 9refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-016 906

FIELD EVALUATION OF LOCOMOTIVE CONSPICUITY LIGHTS. FINAL REPORT

Flashing xenon strobe lamps were installed on locomotives in revenue service as a means of alerting motorists to the hazards they are approaching at a rail-highway grade crossing. Effectiveness of these lights in attracting motorists' attention and the reactions of both motorists and locomotive crews to their use were evaluated. Field observations, interviews, and experiments confirmed the attention-getting value of locomotive-mounted strobe lights used in revenue service to alert motorists and suggested operational procedures and device specifications. Experimentation and observation of the strobe lights under railroad operating conditions verified that these lights do not interfere with perception of trackside signals or with normal motorist and crew operations. These efforts led to the following conclusions: flashing xenon strobe lights mounted on a locomotive attract attention to the locomotive; and such lights produce no uncontrollable adverse side effects. The following recommendations are also offered: the use of flash tubes giving a high-intensity flash of short duration should be considered as a means of increasing locomotive conspicuity; the operation of flashing strobes should be under the control of the engineer; the strobes should be operated at 800 candelas effective intensity at night and 4,000 candelas in the daytime; the rear 30° of the strobe beam should be masked out; because of the larger energy expenditure, the resultant poorer energy transmissivity, and the redundancy of color and flash coupled in a warning signal, an unfiltered xenon strobe should be used, rather than a less efficient color-coded one; additional studies should be conducted into the prolonged operation of the strobes in dense fog or heavy snowstorms to obtain information on backscatter effects and crew tolerance, into the effects of the 800-candela strobe on nearby motorists under the darkest ambient conditions possible (unlighted highway on an overcast, moonless night); and into alternative, possible superior, visual warning systems.

by D. B. Devoe; C. N. Abernethy.
Transportation Systems Center, Kendall Square, Cambridge,
Mass. 02142
Rept. No. DOT-TSC-FRA-74-11; FRA-OR&D-75-54 ; 1975 ;
63p 47refs
Rept. for Mar-Jun 1974.
Availability: NTIS

TESTING TECHNIQUES FOR DETERMINING STATIC MECHANICAL PROPERTIES OF PNEUMATIC TIRES

Fore-aft, lateral, and vertical spring rates were three static mechanical properties selected for this program to determine the effect of testing techniques on the measured values of these pneumatic tire properties. Of these three mechanical properties, the fore-aft stiffness property was affected the most by different testing techniques used to obtain it. Appreciable differences in the fore-aft spring rates occurred using incremental loading techniques and continuous loading techniques. However, varying the fore-aft force loop size had the most significant effect on the values for fore-aft stiffness. The most consistent and usable technique for determining a value for fore-aft stiffness was based on generating and recording a continuous full cycle force-deflection loop. The stiffness value was then determined by measuring the slope of the line connecting the end points of the loop. To achieve consistent stiffness values, it was necessary to closely monitor operating conditions during the test, particularly the size of the force-deflection loop. The dependence of lateral stiffness values on testing techniques followed the same trends as fore-aft stiffness values, except to a lesser degree. However, vertical stiffness values were found to be nearly independent of testing procedures and techniques. Due to a characteristic initial "soft" portion in the vertical load-deflection curve, consistent values of vertical stiffness can only be obtained when its value is determined from a definition that bypasses the initial non-linear portion of the force-deflection curve.

by R. N. Dodge; R. B. Larson; S. K. Clark; G. H. Nybakken
University of Michigan, Dept. of Applied Mechanics and Engineering Science
Grant NASA-NGL-23-005-010
Rept. No. TR-14; 1973; 50p 1ref
Availability: Corporate author

HS-016 908

ANALYSIS OF GUARDRAIL ACCIDENTS IN MICHIGAN

To gain information on the performance of W-beam steel guardrails in accidents, investigating officers filed a supplemental form for each vehicle/guardrail accident on the Michigan State Highway system over a six-month period. Correlation analysis was conducted on the data so obtained for 1,375 single-vehicle/guardrail accidents. The injury rate (proportion of accidents resulting in injury) was higher for 12.5 ft (3.81 m) post spacing than for 6.25 ft (1.90 m) spacing. The injury rate was lower for the vehicles that were redirected rather than vaulting or breaking through the guardrail. Approach endings with a flared end shoe had a higher injury rate than did buried end-sections. There was no significant difference in injury rates between approach-end and mid-rail impacts.

by A. A. Lampela; A. H. Yang
Michigan Dept. of State Hwys. and Transportation, Traffic and Safety Div., Lansing, Mich.
Rept. No. TSD-243-74; 1974; 60p
Availability: Corporate author

THE STATUS OF PERFORMANCE MEASURES FOR EMERGENCY MEDICAL SERVICES

Performance measures for emergency medical services (EMS) are classified into three types: input, process, and outcome. Examples of each type are cited in the EMS literature and analyzed for conceptual validity and practicality. No single measure or set of measures appears wholly adequate. The use of "salvageable deaths among traffic fatalities" as a performance measure is reviewed to illustrate the difficulty in valid EMS evaluation. It appears that the common claim that 20% of traffic deaths could be saved with better EMS is open to serious question and that the value of a "modern" EMS is uncertain. In particular, it appears that the public claims of success for the Illinois statewide trauma network have not been convincingly documented. Ambulance responses and their measurement are dealt with most often and the literature review illustrates the unsettled state of affairs regarding these matters.

by T. R. Willemain
Massachusetts Inst. of Tech., Operations Res. Center,
Cambridge, Mass. 02139
Grant NSF-G138004
Rept. No. TR-06-74; 1974; 37p 43refs
Availability: Corporate author

HS-016 910

ANALYZING THE PROCESS OF SCREENING CALLS FOR EMERGENCY SERVICE

The increasing demand for urban emergency services raises the possibility that the quality of service provided might be improved by a better matching of resources to needs through a process of screening. Because of the risk of errors on the part of the screener, there is a natural reluctance on the part of those responsible for providing these services to undertake such a program. A methodology for characterizing the quality of a screening program is provided and the conditions under which the introduction of screening can improve service are established. Screening is also compared to adding response units as an alternative method for improving service. While it is probably impossible to determine the actual performance of screeners theoretically, it is possible to analyze mathematically a rather simple process called "categorical screening." The optimal categorical screening policy was determined under two conditions: "loss screening," in which screened calls receive secondary rather than primary service; and "priority screening," in which calls are assigned low priority in any queues that form. The fact that a screening method as crude as categorical screening can improve service suggest that trained personnel should be able to do much better.

by K. A. Stevenson; T. R. Willemain
Massachusetts Inst. of Tech., Operations Res. Center,
Cambridge, Mass. 02139
Grant NSF-G138004
Rept. No. TR-08-74; 1974; 51p 8refs
Availability: Corporate author

HS-016 911

APPROXIMATING THE PERFORMANCE OF URBAN EMERGENCY SERVICE SYSTEMS. REV. ED.

An approximate procedure is presented for computing selected performance characteristics of an urban emergency service system. Based on a recently developed hypercube queuing model, the procedure requires for N servers solution of only N simultaneous equations, rather than 2 to the Nth as in the exact model. The procedure relies on the theory of M/M/N/ queues in which servers are selected randomly and without replacement until the first available (free) server is found. The underlying model is intended for analyzing problems of vehicle location and response district design in urban emergency services, includes interdistrict, as well as intradistrict responses, and allows computation of several point-specific, as well as area-specific performance measures.

by R. C. Larson
Massachusetts Inst. of Tech., Operations Res. Center,
Cambridge, Mass. 02139
Grant NSF-GJ38004
Rept. No. PP-03-74 ; 1975 ; 46p 23refs
Availability: Corporate author

HS-016 912

PATIENT AND BYSTANDER RESPONSE TO MEDICAL EMERGENCIES

Patient and bystander responses to medical emergencies revealed serious shortcomings in the public's ability to respond appropriately to such situations. Decision delays at least as long as ambulance response delays were found to be the result of confusion regarding the seriousness of the emergency, confusion regarding the appropriate reaction to the emergency, and a reluctance to burden the rescue service unnecessarily. A significant group of high-risk patients were identified who not only reacted slowly, but who bypassed the emergency ambulance service entirely. A substantial fraction of these patients have had prior contact with the local medical care system for problems related or identical to the one causing the emergency. On an individual basis, physicians might benefit their patients by making a more conscientious effort to educate those at risk about the indications for and use of local emergency transportation. Viewing the medical care delivery system as a whole, an argument can be made for developing a telephone system providing emergency medical information easily accessible to patients who think they may be experiencing an emergency.

by R. P. Mogilnicki; K. A. Stevenson; T. R. Willemain
Massachusetts Inst. of Tech., Operations Res. Center,
Cambridge, Mass. 02139
Grant NSF-GJ38004
Rept. No. TR-05-74 ; 1974 ; 43p 16refs
Availability: Corporate author

HS-016 913

THE MEDICAL AND LEGAL PROBLEMS ARISING FROM THE FAILURE TO WEAR SEAT BELTS

A complete analysis of developments in the law concerning the seat belt defense is provided. In addition, due to the close relationship of medicine and law in this area, the seat belt is explored as both a preventative mechanism and a cause of in-

jury. While there is less than complete accord among the various jurisdictions, the courts are basically divided into two distinct groups: those courts which hold that there is no duty to make use of an available seat belt, and thus refuse to admit any evidence concerning seat belts; and those jurisdictions which recognize a duty to fasten seat belts, but require expert testimony to establish a causal connection between the failure to do so and the injuries sustained.

by S. G. Fischer
Publ: University of Miami Law Review v27 n1-2 p130-76 (Fall-Winter 1972)
1972 ; 227refs
Availability: See publication

HS-016 914

PHYSIOLOGICAL REACTIONS OF DRIVERS AS INDICATORS OF ROAD TRAFFIC DEMAND

Sixty drivers, all accustomed to a certain make of car, performed test drives along a certain test road. A digital tape recorder was used for real-time recording of the driver's physiological characteristics (electro-dermal response, heart rate, and muscle activity), steering, and braking; the vehicle response (accelerations in three directions, velocity, and distance traveled); and traffic events as coded by the experimenter. The characteristics of the test road were measured in the field. Average responses were calculated for the test road, and significant covariations were demonstrated by using the physiological measures as the dependent variable and vehicle behavior on the road as the independent variable. It was also found that the difficulty of a traffic event affects both the driver's brake use and physiological responses. Stress-inducing road characteristics are downhill grades and short sight distances. It is suggested that the driver's capacity to process information varies flexibly as task demand changes. Sudden increases in task demand can be leveled out by modeling the road environment, and this makes the driver more competent at dealing with hazardous situations.

by M. G. Helander
Publ: Transportation Research Record N530 p1-17 (1975)
1975 ; 20refs
Sponsored by Comm. on Rd. User Characteristics.
Availability: See publication

HS-016 915

DRIVER WORK LOAD FOR VARIOUS TURN RADII AND SPEEDS

The need exists for a method by which a highway designer can determine, during the design stage, whether a highway design will demand so much of a driver's attention that there is insufficient time to look for and avoid accidents. One aspect of attentional demand is tracking the lane in curves and tangent sections. A study was done to determine (by use of a secondary task) what percentage of a driver's attention is required to track a lane while various curves are negotiated at various speeds. In addition, data were gathered about how drivers control their lane position. Results indicated that lane tracking in a 17° turn demanded 26% of the subject's attention at 20 mph (32 km/h) and 42% at 40 mph (64 km/h) and that attentional demand in the straightaway remained around 23% for speeds of 40 to 80 mph (64 to 129 km/h). Lane-tracking data indicated that the median location was 5 in. (13 cm) to the left of the

lane center in straightaways, 7 in. (18 cm) to the left in left turns, and 6 in. (15 cm) to the right in right turns. Distributions of drift distances from these three median locations were also determined.

by L. B. McDonald; N. C. Ellis
 Publ: Transportation Research Record n530 p18-30 (1975)
 1975; 15refs
 Sponsored by Comm. on Rd. User Characteristics.
 Availability: See publication

HS-016 916

DATA ACQUISITION SYSTEM FOR STUDIES OF DRIVER PERFORMANCE IN REAL TRAFFIC

A real-time data acquisition system is described which is installed in a full-sized North American automobile for the study of driver performance in real traffic conditions of driver stress. The basic parameters recorded are distances traveled and three primary control movements: steering wheel, accelerator, and brake. Provision is also made for vehicle yaw measurement, driver's pulse rate, and perceived illumination level in night-driving tasks. Other parameters may be recorded as dictated by project requirements. Test conditions and principal findings of the various projects carried out at the National Res. Council of Canada during the past three years are discussed. In these projects, the frequency and magnitudes of steering wheel movements have formed the basis for assessment of driver performance and task difficulty. The application of power spectral analysis techniques appears most promising, and it is in this context that the advantages of a system for highly flexible, real-time data acquisition are most apparent.

by R. Sewell; C. Perratt
 Publ: Transportation Research Record n530 p31-45 (1975)
 1975; 15refs
 Sponsored by Comm. on Simulation and Measurement of Driving.
 Availability: See publication

HS-016 917

STUDENT WHEELCHAIR TRANSPORTATION. LOADING AND SECUREMENT

A state-of-the-art study was made to assist the Dept. of Education in developing specifications for their "wheelchair" school buses. It was addressed to the outfitting components, i.e., loading and securement equipment. The loading equipment discussed were ramps, lifts, and elevators. Securement involved both the securing of the wheelchair in the vehicle and of the passenger in the wheelchair. Twenty-one entities, including school districts, transportation contractors and suppliers, were visited, and a documentation was made of the systems found. An engineering judgement type evaluation was made of the equipment. In addition to presenting the findings and specification recommendations, several questions raised during the study are discussed relative to the behavior of the student's wheelchair and its associated hardware during a vehicular-type accident. These questions involved cases of fire, internal loading ramps as impact and flying hazards, and wheelchair/hold-down accident characteristics. It was concluded that: there was a need for statewide standard specifications for hardware components on buses used to transport wheelchair students; the use of manufactured securement

equipment should be encouraged, as opposed to make-shift adaptations; more emphasis needs to be placed on fire prevention measures on these vehicles; static and dynamic testing of wheelchair and student securement is needed; the standard commercial type van is deficient as a school bus, because of inadequate head room and lack of standard school bus safety features; and a cost/benefit study, as measured with respect to safety, is needed on buses built specifically for transporting wheelchair confined students. Recommendations were also made concerning the vehicle floor, loading equipment, wheelchair securement equipment, seat belt equipment for passenger securement, and crashworthiness tests of securement equipment and prototype vehicles.

by C. F. Stewart; H. G. Reinl
 California Business and Transportation Agency, Div. of Mass Transportation
 1974; 84p Srefs
 Availability: Corporate author

HS-016 918

RUBBER SUSPENSIONS FOR COMMERCIAL VEHICLES

Several new designs for semi-trailers aimed at exploiting the advantages of rubber springs are discussed. There are a number of ways in which rubber springs can be installed, but for a progressive rate with a reasonable deflection to be obtained, the spring needs to be loaded in compression and shear as a general rule. Springs loaded in shear only can be used, provided that the stress levels are not too high. In practice, there are three types of spring generally available: rubber blocks in compression, rubber in torsion, and rubber in shear and compression. Technical data is provided comparing different brands of these three types of rubber springs.

by John Hartley
 Publ: Automotive Design Engineering v14 p25-7, 29 (Apr 1975)
 1975
 Availability: See publication

HS-016 919

DETERMINING PAVEMENT SKID-RESISTANCE REQUIREMENTS AT INTERSECTIONS AND BRAKING SITES

The approach to the determination of skid-resistance requirements for a site involves three steps: measurement of the longitudinal and lateral accelerations (g forces) developed by automobiles using the site; conducting skid tests studies to develop approximate empirical relationships between maximum accelerations at skidding on standard pavement surfaces when wet and the skid resistance of the surfaces; and the combining of the results of the measurements aforementioned to determine the skid numbers of surfaces that would accommodate driver demand. The system developed for the measurement of longitudinal acceleration at intersections is based on the use of a series of Tapeswitch event detectors to determine the time-position signature of a vehicle over a known distance, from which acceleration values can be computed. Data were collected for an average of 350 vehicles at each of the 12 intersection sites, and longitudinal accelerations were computed for various distances from the stop line. Controlled skid studies to determine the relationships between longitudinal acceleration and pavement skid-resistance requirements

were conducted using seven skid pads of varying surface characteristics. Two instrumented automobiles, a 1970 Plymouth Fury and a 1971 Ford Mustang were used for the skid tests. Three sets of tires (conventional bias, belted bias and radial) were used on the Plymouth and only belted bias ply tires on the Mustang. All tires were relatively new. For the purposes of developing correlations, the skid resistance of each pad was measured as a skid number at 20, 40, and 60 mph using a locked-wheel skid tester. It was apparent from analysis of the braking data that complex interactions exist between pavement surface characteristics, speeds, tires, and vehicles. The measured accelerations for the 12 intersections were converted to required skid resistance. The procedure can be useful in determining whether a particular site is in a category requiring normal, intermediate, or high resistance. It appears that the observation of driver braking behavior in traffic is a rational basis for establishing skid-resistance requirements; and that the Tapeswitch system shows promise for measuring in situ acceleration profiles.

by E. Farber; M. S. Janoff; S. Cristinzio; J. G. Blubaugh; W. Reisener; W. Dunning
Franklin Inst., Philadelphia, Pa.
Rept. No. NCHRP-154; 1974; 72p 33refs
Sponsored by the American Assoc. of State Hwy. and Transportation Officials in cooperation with the Federal Hwy. Administration.
Availability: TRB, \$4.40

HS-016 920

A RADIAL-SPRING TERRAIN-ENVELOPING TIRE MODEL

A radial-spring tire model was developed to envelop irregular features of a rigid terrain and redefine the terrain as an "equivalent ground plane" reflecting both the elevation and slope characteristic of the original terrain contacting the tire. Three different methods were proposed for defining the maximum deflection of the tire, thereby locating the "equivalent ground plane" and defining the radial tire force. Errors in the maximum tire deflections resulting from approximations in the solution procedure could be maintained below three percent of the actual tire deflections when the tire model was tested on a rigid plane surface.

by D. C. Davis
Publ: Vehicle System Dynamics v4n1 p55-69 (Mar 1975)
1975; 5refs
Availability: See publication

HS-016 921

THE WHEEL SHIMMY PROBLEM: ITS RELATIONSHIP TO WHEEL AND ROAD IRREGULARITIES

The equations of motion are derived for a single wheel steerable pneumatic tire system. Included in this system are a built-in wheel wobble and wheel-tire irregularities which produce oscillation of the normal load. Special emphasis is placed on the dynamic characterization of the tire cornering force and aligning torque. The results show that the built-in wheel wobble causes a steady shimmy which is large when the wheel rotation frequency is close to the natural shimmy frequency. The results also show that a normal load oscillation which has

a frequency approximately twice the natural shimmy frequency causes a decrease in shimmy stability.

by W. A. Podgorski; A. I. Krauter; R. H. Rand
Publ: Vehicle System Dynamics v4n1 p9-41 (Mar 1975)
1975; 17refs
Availability: See publication

HS-016 922

THE ROLLING MOTIONS OF ROAD VEHICLES

The rolling motions of vehicles with pneumatic tires is examined. From a simplified mathematical analysis two sources of instability are identified: one related to center of gravity position and the other to tire and suspension characteristics. When a specimen vehicle is considered, it is shown that current semi-trailer design can display instability from either source; specifically, there is a maximum safe height for the center of gravity above the roll axis, and a limiting value of roll steer which may not be exceeded.

by C. G. Shapley
Publ: Vehicle System Dynamics v4 n1 p1-7 (Mar 1975)
1975; 2refs
Availability: See publication

HS-016 923

DEVELOPMENT AND USE OF DRIVING TESTS TO EVALUATE HEADLAMP BEAMS. FINAL REPORT

The results of analyses of accident data to evaluate the contributory role of head-lighting were inconclusive. Reflectance values of various objects in the driver's field of view were measured. Pilot studies were made to evaluate test targets, and the results were used to describe desirable characteristics of a test target for use in subsequent tests. A series of headlighting field tests were carried out to develop a reliable field test method, evaluate variables affecting visibility provided by headlamps, and generate data for use in validating a mathematical model. Driving tests were also conducted to evaluate glare effects of various beams to oncoming and preceding drivers. Three types of targets were developed for the work: a simulated overhead sign, a simulated roadside sign, and a general purpose target to simulate objects on or near the roadway. The latter target could be placed to the right or left of the test vehicle or in the center of its lane of travel. In addition, its reflectivity could be changed. The following variables were investigated: headlamp beam, lateral separation between vehicles, longitudinal separation between vehicles, target type, target reflectivity, target position relative to car path, and target height. All of the above variables were found to be significantly related to the distance at which the orientation of the target could be identified. Targets positioned to the right were more easily seen than ones on the left under glare conditions, and with low beam. Generally, the closer a target is to the pavement, the more easily it is seen. Retro-reflective targets are seen at far greater distances than painted ones, but very high brilliance can make the sign a source of glare. The test-retest coefficient of reliability of the field test procedure developed in this program is estimated to be 0.97. Comparisons between U.S. low and high beams showed that on two-lane roads visibility is greatest if dimming occurs from high to low beam at about 1500 ft. The U.S. low beam headlamps used provided greater visibility than European H4 headlamps, but a mid beam lamp provided visibility greater

HS-016 924

INSTRUCTOR'S GUIDE. NEW YORK STATE PRELICENSING COURSE FOR DRIVERS.

The primary objectives of the prelicensing classroom program continue to be instruction in concepts of defensive driving and reduction of accidents. In this new instructor's guide, a means of developing an awareness of the emotional, as well as the physical factors that affect the motivations and habits of drivers are included. Goals of instruction designed to secure greater student response are expressed as modules. Modules consist of concepts, suggestions or activities and present the following: the program rationale; components of the traffic system (the driver, the vehicle, and the environment); the functioning of the traffic system (factors that influence the components); laws of the traffic system; space cushion driving as an integral part of defensive driving tactics; driver personality as a factor; controllable risk factors of the traffic system (distance limitations, right of way, speed, alcohol or related drugs, and restraints); and uncontrollable risk factors of the traffic system (natural laws, and conditional hazards in the traffic system).

by John O. Moore; James E. Kennedy
 New York State Dept. of Motor Vehicles, Empire State Plaza,
 Albany, N.Y. 12228
 Rept. No. MV-278.7(9/74) ; 1974 ; 56p
 Availability: Corporate author

HS-016 925

TRAFFIC SIGNAL FACILITIES FOR BLIND PEDESTRIANS. PRELIMINARY REPORT.

It is estimated that there are 28,000 blind people in Australia. Here, the basic problems involved in providing adequate street crossing facilities and signals for the blind are defined; the available solutions are identified and examined; and a statement-of-the-art survey is made. Two types of signals are discussed, audible and tactile. Signals must be able to provide a variety of functions: recognition of the facility; orientation; detection; provision of a starting signal; indication of a clearance period; and guidance along the crossing. Buzzers, bells, piezo-electric sound generators, and solid state systems with pre-recorded messages have been used or experimented with as audible signals. Solenoid-operated plungers, vibratory touch posts, and (in Sydney, Australia) a vibratory unit employing a fish-tank pump mechanism in a fibre-glass push-button mechanism have been used as tactile signals. To each type of signal there are advantages and drawbacks. While audible signals are the simplest devices, they can lead to confusion at multi-signal intersections. In city traffic conditions, audible signals would have to be louder than the street noise, which would only add to the noise pollution problem. Those audible signals requiring activation could become inaccessible in

HS-016 926

SAFETY IN TRUCKING OPERATIONS

The literature on braking, stability, jackknifing, and trailer swing is reviewed in sufficient detail to reveal a pattern of development. From this; clearly emerges a realization that there are sufficient theories of braking behavior but insufficient experimental confirmation. The review is composed of seven areas: braking of a rigid vehicle; braking of tractor and semi-trailers; three dimensional models; load proportional braking; controlling wheel slip; fifth wheel; and aerodynamic forces. The conclusions drawn regarding the different areas of the review are respectively: the essential task is the collection of direct statistical data on the incidence and circumstances of accidents in which a tractor-semi trailer or a tractor-trailer is involved and where jackknifing or trailer swing did play or might have played a part; prior to the collection of the statistical data there is no justification for any further totally theoretical analyses, that is, without simultaneous empirical work to provide validation of the theoretical model; a computer program should be run with a wide and comprehensive range of both design and operational parameters with a view of constructing easily-comprehended guide lines on the limits of stability and the effects on them of the many parameters involved; the feasibility of collecting sufficient data at the site of an accident to enable a comparison with a prediction of instability to be made should be checked by attempting this on a number of occasions; that it is desirable to assess the incidence, magnitude, and temporal dependence of aerodynamic forces and moments of various profiles of articulated vehicles including effects due to gusting; the current design of load proportioning and anti-skid systems should be reviewed and the need for rapid and relatively simple periodic checks for serviceability considered; the feasibility of placing restrictions on load distribution on trailers in service should be investigated; study should be made of the effects on stability of road camber, non-infinite semi-trailer torsional stiffness and dual friction surfaces and in the area of vehicle driver interaction.

by V. Marples
 Carleton Univ., Dept. of Mechanical and Aeronautical
 Engineering, Canada
 Grant FMCC-2104-01
 Rept. No. ME/A-75-1 ; 1975 ; 41p 46refs
 Sponsored by the Ford Motor Co. of Canada.
 Availability: Corporate author

HS-016 927

THE CRASH ENVIRONMENT

The crash environment is defined for recent model cars in terms of specific accident circumstances such as object struck,

area of impact, and direction of force. For each accident situation, details for a number of specific impact types and resultant injuries are provided. Details include comparison of single car and two car accidents, as well as comparisons of severe injury accidents with all accidents in the study population from which they were drawn. Data sources utilized were police reports, National Safety Council studies, and the multi-disciplinary accident investigation teams and Tri-Level studies. Included in the discussion of accidents are the Abbreviated Injury Scale rating and the police injury severity scales, against which accident data is plotted. It was found that National Safety Council data indicate that two vehicle accidents are more frequent and result in more fatal accidents than other types. The single vehicle non-collision accident ranks second, but the proportion resulting in fatal injury is higher than in two vehicle accidents. Police injury ratings cannot discriminate among injury levels and appear to be adequate only to identify the occurrence of injury or fatality. From Calspan Tri-Level data, serious accidents that required hospital treatment for at least one occupant differed from the population of injury and property damage accidents from which it was drawn. These more serious accidents involved: more single car accidents; more frontal impacts; fewer rear impacts; more impacts to the top and undercarriage; more right front occupants and fewer drivers; more occupant ejections; fewer restraints used; and more drivers who had been drunk, ill, or asleep. Two car accidents involving severe or worse injuries (Abbreviated Injury Scale three or greater) differed from single car accidents in a number of respects. Two car accidents when compared to single car accidents were found to involve: more impacts to the left front; larger impact areas; more rear impacts; and fewer severe injuries.

by J. W. Garrett
Calspan Corp., Buffalo, N.Y. 14221
1975; 43p 5refs

Prepared for presentation at the Transportation Res. Board
54th Annual Meeting, Washington, D.C., 13-17 Jan 1975.
Availability: Corporate author

HS-016 928

A TRAFFIC ACCIDENT ANALYSIS OF HIGH ACCIDENT LOCATIONS IN THE CITY OF MARQUETTE

The study procedures involve several distinct phases: basic data collection, identifying and locating high accident locations; field investigations; an accident analysis of the high accident locations; technical evaluation of previously compiled facts; and remedial recommendations. Data collection was centered around State Police accident files (the repository of all Michigan accident reports), from which the 25 highest accident locations in the city of Marquette were selected for detailed analysis. Subsequent to the determination of these 25 locations, field investigations were conducted; collision and physical condition diagrams were prepared; and traffic counts were obtained. The accident analysis phase involves the analysis of the summarized facts and field data from the viewpoint of a highway traffic engineer with special attention focused on the effect which the highway environment may have had on the accident. Thus, at each high accident location, individual accident reports were reviewed in detail and the accident factors were tabulated and grouped in various tables. The collision

analysis of the compiled data is used to recommend corrections to those conditions which may be contributing to accidents. Of the 25 locations analyzed, only 15 gave indications of the road environment being an accident factor. Recommendations relative to some or all of the 15, dealt with: wet pavement conditions, indicating skidometer tests and re-surfacing for specific roads; traffic signal modernization, including multiple face signals and distinctive, yellow painted housings; turning radii re-evaluation; relocation of utility poles; and the painting of center lines yellow.

by R. G. Lariviere
Michigan Dept. of State Hwys. and Transportation Traffic Engineering Services
Rept. No. TSD-223-73; 1974; 102p
Prepared in cooperation with the Michigan Office of Hwy. Safety Planning and the Federal Hwy. Administration
Availability: Corporate author

HS-016 929

CHARACTERISTICS OF HIGH RISK DRIVERS, ALCOHOLIC AND OTHERWISE

An attempt is made to define "safe" and "unsafe" driving, with or without alcohol involvement. The first sample examined consisted of nearly 2000 chronic alcoholics, male and female, drivers and non-drivers, who had been admitted to a Michigan hospital as patients at least once between June 15, 1956 and January 1, 1964, and who had survived until at least December 31, 1965. The following data was used: medical records, including emergency room contact and medications taken; ongoing reports, including evaluation of the progress of each contact, if any, the patient had with the hospital's therapy program for alcoholics; driver records and criminal conviction records, if any, on each patient; and death records for those who died before 1966. Instead of comparing alcoholic to non-alcoholic drivers, subgroups of alcoholics are compared with each other on these variables: the relationship between blood alcohol level and impairment of assorted skills, traffic accidents, and the number and type of traffic offenses. An index of "potential risk on the highway" was developed, which gives drivers a "risk potential" score on the basis of their driving records. The distributions of risk groups in two alcohol-related driving samples, the chronic alcoholics and people arrested for driving under the influence of liquor (DUIL), showed some simple comparisons which verified that the index was useful as a "risk categorizer". The hospital sample consisted of hospitalized alcoholics who drive, who proved to include many more low and medium risk drivers than high and extra high risk drivers while the DUIL's included a preponderance of high and extra high risk drivers. A direct correlation was found between risk level and other legal offenses, which revealed that the significant factor was not the alcohol level, but rather the individuals personality, as indicated through their life styles.

by M. L. Clay
University of Michigan, Mental Health Res. Inst., Ann Arbor, Mich.
Rept. No. Communication-304; 1974; 26p
Presented at the North American Congress on Alcohol and Drug Problems, San Francisco, Calif., 14 Dec 1974.
Availability: Corporate author

HS-016 930

TRAFFIC RECORDS WORKSHOP, DECKERS, COLORADA, SEPTEMBER 17-20, 1973. PROCEEDINGS

A series of technical papers provide guidelines for the application and examples of the usefulness of traffic records systems in the following areas: a general framework for traffic records systems; the identification and surveillance of high accident locations; an evaluation of safety improvement projects; the allocation and assignment of enforcement personnel; highway maintenance programming and evaluation; an evaluation of adjudication procedures; determining the nature and magnitude of the traffic safety problem; response to public inquiries; budgeting and budget substantiation; and highway safety research.

Transportation Res. Board, Com. on Traffic Records, 2101 Constitution Ave., NW, Washington, D.C. 20418
Rept. No. TRB-Circ-168 ; 1975 ; 48p
Availability: TRB

HS-016 931

ENGINE COOLING SYSTEM OF MILITARY COMBAT/TACTICAL VEHICLES

Military combat/tactical vehicles, such as tanks, are designed to be deployed and operated constantly in close proximity to the enemy fire. In order to provide sufficient protection for the engine and its vital systems, they are located in an almost completely enclosed and heavily armored compartment ventilated through highly restricted ballistic grilles. The space available for the cooling system in the engine compartment is limited. The heat ejection rate from various sources is high. The cooling air flow path is clumsy; repeated enlargements and reduction of the air flow sectional areas, complemented by possible bending and twisting, are common. The effective cooling air temperature is much higher than that of the ambient. All these factors alone make the cooling system designs of the subject vehicles quite different from that of the commercial vehicles, not to mention the severe military environment within which the cooling system must function properly. Unclassified technical information directly related to the cooling system design of the subject vehicles is presented. Severe military environment and its impact on the cooling system design are discussed. Characteristics of major components, such as ballistic grilles and their air resistance data are presented. Typical arrangements of air flow path and liquid flow path are described. Basic design methods are discussed.

by J. P. Chiou
University of Detroit
Rept. No. SAE-750030; 1975; 20p 69refs
Presented at the Automotive Engineering Congress and Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-016 932

THE INTERLOCK IS DEAD×

Detailed instructions are given for the disconnection of the interlock systems in 1974 and 1975 General Motors, Ford, and Chrysler Corp. cars. There is also a brief discussion of the

developments leading to the requirements for interlock systems and their subsequent repeal.

by John Fuchs
Publ: Motor Trend v27 n2 p47-50 (Feb 1975)
1975
Availability: See publication

HS-016 933

EXAMINATION MODEL FOR SUSPECTED DRUNKEN DRIVERS

A mathematical analysis of the relationship between the clinical test results and blood alcohol was performed in 494 cases examined for suspected drunken driving at the Department of Forensic Medicine, University of Helsinki. The performances of 21 clinical tests were symbolized by point values and the relative value of various performances of clinical tests was determined as a point combination resulting in maximal value of correlation coefficient between the test results and blood alcohol. The relative mutual value among various tests (walking along a line, walking with eyes closed, Romberg's test, finger-finger touching, collecting small objects, counting backwards, time orientation, and nystagmus tests) was determined using the above-mentioned point combinations and regression analysis, i.e. by determining the optimal blood alcohol estimate on the basis of clinical test results. More than 100 various examination models were displayed using a computer. Highly significant values of the correlation coefficients of various clinical tests and regression coefficients of optimal and several other models indicated the adequacy of the mathematical analysis for generation of a new examination model for suspected drunken drivers. Values of the regression coefficients of the optimal models with 6 to 10 clinical tests were .72 and .73 respectively. The nystagmus tests were the most valuable in all models studied and in the cases with blood alcohol lower than 1.50 0/00 the optimal estimate of the blood alcohol level was feasible using only the results of nystagmus phenomena. The present mathematical design with blood alcohol related error point values of clinical test performances was an advantageous method for standardizing the clinical examination system in relation to blood alcohol, to summarize total error in clinical examination and to combine the results of clinical examination and blood alcohol in an adequate way.

by A. Penttilä; M. Kataja; M. Tenhu
Publ: Blutalkohol v12 n1 p24-38 (1975)
1975 ; 31refs

Supported by the National Res. Council for Medical Sciences of Finland and the Finnish Foundation for Alcohol Studies.
German summary.
Availability: See publication

HS-016 935

CHOICE REACTION TIME AND LOCATION OF VEHICLE CONTROLS

The reaction time of 24 nondriver subjects was measured to six controls in each of two cars, one with an "American" style layout, the other with a "European" style layout. The subjects uniformly reached for and touched the controls in the European style car faster, a finding which has implications for the design and layout of motor vehicle controls. Implications of the further finding that reactions to immediately repeated stimuli were uniformly faster are also mentioned. That is

whenever the same hand is used in an immediately repeated response, the response is faster.

by A. S. Faust-Adams; R. J. Nagel
 Publ: Perceptual and Motor Skills v40 n1 p183-6 (Feb 1975)
 1975 ; 1ref
 Availability: See publication

HS-016 936

HIGHWAY ACCIDENT REPORT--AUTOMOBILE INTRUSION ONTO THE LONG ISLAND RAILROAD ELECTRIFIED TRACKS, AND FIRE, GARDEN CITY, NEW YORK, AUGUST 8 1973

The National Transportation Safety Board (NTSB) determined that the cause of this accident was the driving of a 2-door car by an unlicensed untrained juvenile, who failed to negotiate a "T" intersection turn, running off the roadway onto the railroad tracks and crashing into the electrified third rail. Loss of life was caused by the inability to escape from the back seat (either to lack of knowledge about the location or operation of the back seat latch, or latch inoperability due to a load on the front seatback), and the rapid spread of fire. The rapid spread of fire was contributed to by the continued electrical arcing permitted by the design of the railroad electrical system, and the inability of emergency personnel to affect a rapid power shut-down. This hampered both fire control and occupant rescue. The NTSB recommended: that the National Highway Traffic Safety Administration revise FMVSS 207 to include a standardization of location and operation of seatback latches, and construction allowing easy latch operation regardless of seatback load applied; that the Federal Highway Administration study the hazard that exists when vehicles fail to negotiate "T" intersection turns and leave the roadway, and to develop engineering practices which will eliminate this problem; that the Federal Railroad Administration FRA promulgate regulations to cover the operation of catenary and third rail power supply systems when power is interrupted, or circuit breakers actuated; and that the FRA and the Long Island Railroad develop procedures and equipment by which emergency personnel can safely short circuit the third rail.

National Transportation Safety Board, Bureau of Surface Transportation Safety, Washington, D.C. 20591
 Rept. No. NTSB-HAR-74-3 ; 1974 ; 33p
 Contains Hwy. Safety Recommendations H-74-25 through H-74-30.
 Availability: NTIS

HS-016 937

FULL INSURANCE AVAILABILITY. REPORT OF THE FEDERAL INSURANCE ADMINISTRATION

The proposed Full Insurance Availability (FIA) system would enable the more than 30 million drivers who are currently uninsured, or who have been forced into the substandard and unlicensed markets, or into Fair Access to Insurance Requirements plans or automobile assigned risk plans, to purchase essential insurance at an appropriate rate from the insurer of their choice. Under this proposal, no insurance company could refuse to sell property or casualty coverage to any insurable risk. At the same time, the FIA proposal endorses the right of insurers to seek a reasonable profit and provides procedures whereby so-called residual market losses can be distributed more equitably than is done today. The proposal entails no

Federal role, no Federal or other public subsidy, and would require all risks to pay a premium appropriate to the exposure they represent. In addition to giving the details of the FIA system, the development, deterioration and deficiencies of residual insurance markets, and the insurance systems in Canada, Japan, and Western Europe are discussed.

Dept. of Housing and Urban Devel., Federal Insurance Administration, Washington, D.C. 20410
 Rept. No. HUD-FIA-73 ; 1974 ; 121p refs
 Availability: GPO \$1.50, St. No. 2300-00278

HS-016 938

RECOGNITION OF SYMBOL AND WORD TRAFFIC SIGNS

A 35 mm slide tachistoscope projector was used to present 26 subjects with both symbol and word traffic signs, 1 at a time for an exposure duration of either 1/3- or 1/18-second. Each presentation was followed by either a 5- or 10-second delay, or a 10-second interference period, after which the subject was asked to match the test sign to an identical sign, which was 1 of 10 shown on a following slide. The accuracy of the match was recorded. During the 10-second interference period, the subject was required to perform a simple reading task. Ten subjects were tested at the 1/3-second viewing time and 16 at the 1/18-second viewing time. All subjects, both drivers and nondrivers, were familiar with the word signing system, but only 1 had been previously exposed to the symbol system. The results of the study show that, under these laboratory conditions, symbol signs are more accurately recognized at the 1/18-second viewing time than are word signs.

by L. Ellis King
 Publ: Journal of Safety Research v7 n2 p80-4 (Jun 1975)
 1975 ; 11refs
 Availability: See publication

HS-016 939

TEENAGE DRIVER FATALITIES FOLLOWING REDUCTION IN THE LEGAL DRINKING AGE

Data accumulated over 6 years through the mandatory Wisconsin program for blood alcohol testing of traffic fatalities were analyzed to determine the effect of reduction in the legal drinking age. No significant increase in alcohol-involved traffic fatalities among youthful drivers was found following the change from availability of beer only to statewide availability of all alcoholic beverages at age 18. Approximately 60% of all tested driver fatalities aged 18 to 20 had appreciable blood alcohol concentrations (0.050%), and this proportion remained substantially the same throughout the study period, 1968-1973. Alcohol involvement among 18 to 20 year old victims tested was less frequent than for those aged 21 to 44. There was no evidence that small blood alcohol concentrations enhanced the likelihood of fatal accidents in youth more than in older persons.

by E. M. Naor; R. D. Nashold
 Publ: Journal of Safety Research v7 n2 p74-9 (Jun 1975)
 1975 ; 14refs
 Availability: See publication

Examined. These include problems with delineating the beginning and end of the accident, methods for discovering and testing the relevance of facts of the accident, and methods for presenting the findings of the investigation. Criteria for approaches to resolve these difficulties are suggested. Concepts influencing current methods of research and investigations are discussed, along with their limitations in terms of the suggested criteria. A generalized explanation for the accident phenomenon based on the role of perturbation in an events sequence (P-theory) is proposed, and a charting method for ordering the events of a particular accident are presented. Development of an events indexing system for future accident data collection is suggested.

by Ludwig Benner, Jr.

Publ: Journal of Safety Research v7 n2 p67-73 (Jun 1975)

1975; 13refs

Availability: See publication

HS-016 941

SUCCESSFUL ALTERNATIVES TO LICENSE SUSPENSION: THE DEFENSIVE DRIVING COURSE AND THE PROBATIONARY LICENSE

The effectiveness of driver improvement suspension was evaluated relative to four alternatives: No contact, a last-chance warning letter, a probationary license, and a defensive driving course (DDC). Drivers were randomly assigned to these 5 conditions (including license suspension) with the exception that the Defensive Driving Course was available only in the three largest metropolitan areas of Oregon. The proportion of drivers in each group who were able to drive a full year without a moving violation or chargeable accident was compared among the groups. A final sample of 932 drivers' records was analyzed. Drivers in the probationary license and DDC groups had significantly superior driving records in the followup year than did the suspension group. The probationary license also appeared to have a significant delaying effect on the occurrence of subsequent traffic citations or culpable collisions. The overall evidence argued for more extensive use of probationary licenses and the Defensive Driving Course. This conclusion does not imply the discontinuation of suspension as a driver improvement device, since it is likely that the effectiveness of both the probationary license and the Defensive Driving Course might be at least partially due to the presence of suspension as a less desirable alternative.

by N. Kaestner; L. Speight

Publ: Journal of Safety Research v7 n2 p56-66 (Jun 1975)

1975; 9refs

Partially supported by the National Hwy. Traffic Safety Administration, Hwy. Safety Proj. No. DL 70-001(001-003).

Availability: See publication

HS-016 942

TRAFFIC INJURY RESEARCH FOUNDATION OF CANADA. SCIENTIFIC SESSION OF THE ANNUAL

point systems in predicting risk of accidents; the effects of carbon monoxide on driving skills; the method of using task analysis to identify safety-critical truck driving behavior; prospective studies of traffic injuries in relation to the medical condition of drivers; a description of the Countermeasures Development Program of the Ministry of Transport; a study of the Alberta impaired Drivers' Project; and an analytical assessment of human visual limitations in a dynamic situation. Also presented are the stated objectives of a proposed study of emergency medical care in the Ottawa-Hull area; some descriptions of collision investigations in Montreal; a report on the sharp decline in impaired driver fatalities in Alberta; and a report of studies of children's restraints.

Traffic Injury Res. Foundation of Canada, 1765 St. Laurent Blvd., Ottawa, Ont., K1G 3V4, Canada

1973; 83 refs

Includes HS-016 943 through HS-016 953.

Availability: Co-prepare author

HS-016 9-43

MOTORCYCLE HELMET STUDY; THE HELMET STANDARD DILEMMA

The capability of CSA Standard D230 to effectively evaluate the performance characteristics of currently available motorcycle helmets is examined. Current standard helmet test procedures provide some assurance that a helmet will protect the wearer from the initial blow to the helmeted test headform is characteristic of that received in an accident; the headform adequately models the head of the human wearer; and the response of the system and the acceptable limits bear some relation to the biomechanics of head injury. Dilemmas, however, remain: a typical blow to the head of a motorcyclist in an accident is now known to have the possibility of an energy transfer for which no known helmet could provide the slightest protection; and nonconformic headforms still need extensive developmental work before they can be expected to respond similarly to a human head in an impact situation; and a scarcity of knowledge of the tolerance to head impacts of the human head continues to exist. Despite these difficulties standards have had to be developed. A summary of the approaches of different standards is tabulated. To assess the degree to which CSA certified helmets do, in fact, reduce motorcycle crash induced head injuries and to ascertain the extent to which CSA certification testing does indeed insure that a helmet provides a reasonable degree of protection are primary objectives of the ongoing study.

by J.A. Newman

University of Ottawa, Dept. of Mechanical Engineering, Ottawa, Canada

Publ: HS-016 9-42; Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th)

Proceedings, 1973 p5-8

1973; 9 refs

Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.

Availability: In HS-016 942

RESEARCH ON DRUGS AND DRIVING

Discussion of the effects and usage of various drugs, alcohol, the compound methaqualone, the minor tranquilizers (Valium and Librium), and cannabis, either alone or in combination, is presented. Existing models used in current research are discussed. Problems of study are multiplied when drug interactions are investigated. It is concluded that, even though the eventual demonstration of drug action and interaction in impairing driving ability and increasing accident risk will only be achieved when consistent results are obtained in adequate models, we cannot afford to wait for these results before taking any action. Caution must be advised in combining alcohol with the ingestion of any other potent psychoactive drug. Graphs and tables of experimental data, shown as slides, are presented.

by M. MacConaill; G. Ling
University of Ottawa, Dept. of Pharmacology, Canada
Publ: HS-016 942, Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th) Proceedings, 1973 p11-14A
1973
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.
Availability: In HS-016 942

HS-016 945

TROCHANTERIC FRACTURES

A study is reported on the incidence and treatment of trochanteric fractures of the femur, especially those resulting from traffic accidents (50% of the adult and 80% of the child group in this study). The incidence of this injury in children is of special interest. Regarding the treatment of trochanteric fractures, it is reported that the number of experiments is too small to give definite conclusions but that more will be done in the future. Up to the present, the best fixation is obtained when the fracture is reconstructed with methylmethacrylate. Analysis of a child patient group between 1962 and 1972 at the "Hospital for Sick Children" in Toronto revealed that: there were 14 girls and 6 boys (a reversal of the usual sex ratio for fractures in children); the average age at the time of the fracture was 6.9 years with a range of 2-1/2 to 12 years; 16 fractures involved the left limb and 4 the right; 16 children were injured in motor vehicle pedestrian accidents; one fracture was compound; 13 children suffered associated fractures and all had some soft tissue injury; significant craniocerebral injury occurred in 11 of the 20 patients; one patient died of head injury; 4 patients had residual post-traumatic spastic hemiplegia as a result of the head trauma; and in 3 of these 4 patients, the cerebral injury was contralateral to the side of the fracture. This last condition occurs when children, playing in the street, are struck by a car at hip level and thrown to the ground thus sustaining other injuries including head injury.

by A. Beaupre
Saint Sacrement Hosp., Orthopaedic Service, Quebec, P.Q., Canada
Publ: HS-016 942, Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th) Proceedings, 1973 p15-18
1973
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973. French Summary.
Availability: In HS-016 942

HS-016 946

THE EFFECT OF DRUGS ON THE LEARNED BEHAVIOUR AND THE MOTOR FUNCTION OF RATS

The setting up of an animal model in an effort to reduce the subjectivity of human studies and to develop a standardized model of evaluating drugs that might interfere with the driving act is described. A study was designed to examine the effect of drugs on the learned behavior and motor function of rats in a complex maze. Three psychotropic agents, Phenobarbital Chlordiazepoxide (Librium), Diazepam (Valium), and sodium salicylate (aspirin), were used in the tests. In addition, delta 9 transtetrahydrocannabinol (delta 9 THC) was used. The rats were trained to run the maze in a mean time less than 15 seconds per run prior to drug injection trials. During the drug trials each rat was run 4 times daily except the day of and the day following the injection. On the injection day, they were run prior to and several times at different intervals, after injection. Time and time/dosage graphs are provided. The effects of each drug on the motor function of the rats is summarized. Nine male Wistar rats were injected intraperitoneally with phenobarbital, chlordiazepoxide; diazepam, and sodium salicylate at various dosages. The effects of these were investigated by observing the animal's performance in a 6 alley maze. The mean errors per trial were not significantly affected by any of these doses. The mean running time per trial was significantly affected by all but sodium salicylate. The maximum effect of each drug was seen at 15 minutes post-injection. Seven male Wistar rats were given delta 9 THC by gavage at various dosages in a random order. A 6 alley maze was again used. The mean errors per trial were not significantly affected by any of the doses. The mean running time per trial was significantly increased with doses 2.0 mg/kg and 4.0 mg/kg. The maximum effect was seen at 120 minutes post-administration. It was concluded that the drugs under study with the exception of sodium salicylate, seem to have a deleterious effect on the performance of motor function and that this could be a potential hazard in driving.

by R. G. Dvorak; W. R. Ghent
Queen's Univ., Kingston, Ont., Canada
Publ: HS-016 942, Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th) Proceedings, 1973 p19-25
1973
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.
Availability: In HS-016 942

HS-016 947

IDENTIFICATION OF SAFETY-CRITICAL TRUCK DRIVING BEHAVIOUR (BEHAVIOR) BY MEANS OF TASK ANALYSIS

Because of the possible magnitude, complexity and fine distinction of the details involved in safety-critical driving behavior (SCB), identification of SCB was attempted by employing a formal methodological task analysis. The advantages of such a method are pointed out. The task was identified as maintaining required forward motion and path within the posted speed limit. The display problem included driving the truck at the speed limit on a straight road, assuming no curves or traffic, and assuming level, positive, and negative roadway grades. The critical stimulus variables were: speed limit; grade of road; engine speed and characteristics; loading of vehicle; position of accelerator pedal; gear in use and characteristics;

camber in road surface; and the obstacles on the roadway. Other information categories used in the task analysis were: the time values (steering corrections before truck leaves lane, and optimum shift points and braking time when over speed limit); display noise (poor visibility, unknown speed limit, awkward boots, and "deadband" in steering); required decisions (speed up or slow down now, speed up or slow down soon, and move steering wheel); controls (accelerator, brake and clutch pedal, gear selector, and steering wheel); control activation to yield desired speed, gear, or direction; control action (determined by acceleration/ deceleration properties of truck for particular gear, grade and loading, rate of deceleration dependent upon grade, speed, vehicle weight and force on pedal, amount of rotation depending on steering ratio of vehicle, force depending on ratio, loading, amount of power assist, road surface, speed, and tire pressure); feedback (cues, time delay, criteria of response adequacy, critical values and corrective actions); and characteristic errors (accelerator overcorrection, steering overcorrection, excess change in acceleration and braking). The present state of the project is outlined. Work is underway on the validation of the task analysis and its underlying assumptions. A structured questionnaire-interview technique is to be used on a sample of professional truck drivers. Also underway are a critical review of fatigue measurement techniques, and an anthropometric survey of truck cab dimensions. The future tasks and potential applications of the program and the task-analysis technique are stated.

by Gerald F. Rabideau; Paul B. Young
University of Waterloo, Dept. of Systems Design, Waterloo, Canada
Grant NRC-A-8529
Publ: HS-016 942, Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th) Proceedings, 1973, p26-34
1973; 5 refs
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973. Partial progress report of research performed during Phase 1 of "Experimental Study of Transport Vehicle Control-Display Systems".
Availability: In HS-016 942

HS-016 948

PROSPECTIVE STUDIES OF TRAFFIC INJURIES IN RELATION TO MEDICAL CONDITIONS OF DRIVERS. METHODOLOGY AND PROGRESS REPORT

A project designed to set up a representative sample for study, taken from the population of drivers in greater Montreal, is described. The objectives of the project are: to determine information about medical and related factors possibly affecting the risk of traffic injury, and information on mileage driven each year; to obtain from official records details of all accidents suffered by the drivers in the sample; and by making comparisons, within the sample, of injury rates in relation to the assessed medical and allied conditions, to identify medical and other related factors which affect traffic injuries and death. A method for carrying out all of the objectives includes: the utilization of the records of the Motor Vehicle Bureau for the province of Quebec; telephone interview-questionnaires; and compilation of all the information on each driver in the sample into one record. The method has been verified by a feasibility study. A sample of 2713 drivers was obtained by selecting all Montreal drivers born on a particular day in January. So far 90.6% of the telephone interviews attempted have been successful. Some reported characteristics of 811

Montreal drivers are tabulated and a sample telephone questionnaire is provided.

by F. D. K. Liddell
McGill Univ. Dept. of Epidemiology and Health, Canada
Publ: HS-016 942, Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th) Proceedings, 1973 p35-41
1973
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.
Availability: In HS-016 942

HS-016 949

THE EFFECTIVENESS OF THE POINT SYSTEM IN PREDICTING RISK OF ACCIDENTS

A study with the following objectives is proposed: to characterize drivers in Ontario at different levels of penalty points by history of accident involvement, types of previous violations, rate of point accumulation, age, sex and residence; to estimate their risk of subsequent accident involvement, of further violations, and their rates of further point accumulation of following up these drivers each year for two years; to evaluate the point system as a means of predicting future accident involvement and violations by comparing the experience of drivers at different levels of points; and to use the other information on these drivers, especially rate of point accumulation, to predict future accident involvement and violations. The study sample will consist of 2500 driver records, drawn randomly from the file of licensed drivers in the province of Ontario. Five hundred will be drawn from each of the five following groups of drivers: drivers with 0-2 points, with 3-5 points, with 6-8 points; with 9-11 points, and with 12 or more points. Information to be obtained from the driver record will include the following: driver's sex, age and level of penalty points; size of town of current residence; rate of accumulation of points, of violations, and types of violations for the total record and within the immediately previous year; the presence of criminal code convictions; and some means of identifying the record so that it may be followed up to a period of two years. Driver records will be analyzed for comparison among the five groups of drivers for differences in age, sex, size of town and driving history; estimation of the relative risks of future accidents and future violations, based on the level of penalty points and other factors; and examination, using discriminant analysis, of a combination of factors which seem to have a significant bearing on the risk of accident involvement during the follow up periods in an attempt to discriminate between drivers with accident involvement or violation and those without. A budget for one year's support for the three-year study is proposed.

by P. Morgan; M. Chipman
University of Toronto, Dept. of Preventive Medicine, Toronto, Canada
Publ: HS-016 942, Traffic Injury Research Foundation of Canada. Scientific Session of the Annual Meeting (10th) Proceedings, 1973 p42-44
1973
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.
Availability: In HS-016 942

HS-016 950

**COUNTERMEASURES DEVELOPMENT
PROGRAMME [PROGRAM]. MINISTRY OF
TRANSPORT**

A program of applied research designed to identify and develop more effective safety measures is described. The main areas in which the program is most active are discussed: vehicle standards; seatbelt usage; alcohol and driving; and road improvements. Presented as a report of research in progress, the discussion does not seek to provide any solutions.

by S. C. Wilson
Department of Transport, Countermeasures Devel., Ottawa,
Canada

Publ: HS-016 942, Traffic Injury Research Foundation of
Canada. Scientific Session of the Annual Meeting (10th)
Proceedings, 1973, p45-7

1973
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.

Availability: In HS-016 942

HS-016 951

**ANALYTICAL ASSESSMENT OF HUMAN VISUAL
LIMITATIONS IN A DYNAMIC SITUATION**

A study was conducted to assess human visual behavior in an operational context, using a simulated driving task. The goal was to formulate quantitative models of human visual performance in terms of peripheral visual signal detectability and reaction time. The dynamic continuous central task was derived from a roadway film run at speeds to simulate 20 to 60 mph which is extended into the periphery providing a realistic illusion of motion. Facilities and apparatus used in the experiments are described using a diagram, drawing and photographs. Using simple stimuli of white light, some significant differences in response time measurements at various locations in the field of vision have been uncovered. It has also been established that peripheral visual performance is dependent upon a number of factors that are environmental, operator centered, procedural and/or related to the nature and type of stimulus used. A multiparameter approach is now being taken with a view to uncovering the simple and complex interactions among the various parameters tantamount to formulating performance prediction models.

by D. S. Kochhar; T. M. Fraser
University of Waterloo, Dept. of Systems Design, Waterloo,
Ont., Canada

Publ: HS-016 942, Traffic Injury Research Foundation of
Canada. Scientific Session of the Annual Meeting (10th)
Proceedings, 1973 p48-52.

1973; 3refs
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.

Availability: In HS-016 942

HS-016 952

**THE ALBERTA IMPAIRED DRIVER'S PROJECT--
(I.D.P.); A COUNTERMEASURE TO COPE WITH
THE DRINKING DRIVER**

The adaptation of alcohol countermeasures to a Canadian situation, the Alberta Impaired Drivers' Project (I.D.P.), an outgrowth of a court rehabilitative program, is described. Outlined are the rationale and specific procedures of the project.

The project is based on the premises that an offender will be in a better condition to select alternatives to impaired behavior and to modify his own once he is informed of the influence of alcohol on driving skills and of the consequences of drunken driving, encouraged to assess his own drinking and driving behavior, and allowed to explore the ramifications of his behavior in a friendly, non-judicial group setting. The project includes a course consisting of four lectures with discussions, films and knowledge and attitude questionnaires that are administered with the first and last lecture. The first lecture includes a general introduction in which the aims and requirements of the course are explained, a Personal Questionnaire along with which the attendees are asked to describe the 12 hours preceding the offense, a discussion of the magnitude of the problems involved in impaired driving, a Knowledge and Attitude Questionnaire, and a "shocker" film. At the second lecture, students return their questionnaires, see another film, and are given presentations regarding license suspension and re-instatement and insurance matters. As the third lecture opens there is a noticeable improvement in the character of the group and attitude of the students. There is a discussion of driver training and defensive and good driving practices, a film is shown, the problem drinker and alcoholism are discussed, another film is presented, and the symptoms and available guidance and care for alcoholism are described. During the fourth lecture, frank reactions and responses to the course are requested of the students. A final shock film is shown and the final questionnaire is completed. A judge may bring a final word of encouragement and appreciation to the student body. The project seems to have, according to the data collected, a quantifiable effect on persons convicted for impaired driving.

by J. G. Strachan
Impaired Drivers Proj., Alberta, Canada
Publ: HS-016 942, Traffic Injury Research Foundation of
Canada. Scientific Session of the Annual Meeting (10th)
Proceedings, 1973 p53-66

1973; 3refs
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.

Availability: In HS-016 942

HS-016 953

**EFFECTS OF CARBON MONOXIDE ON DRIVING
SKILLS**

The effects of a moderate dose of carbon monoxide upon driving skill has been examined using a double-blind experiment. Eighty ml of pure carbon monoxide (CO) or an equivalent volume of air was administered to 50 adults, average citizens of a small town near Toronto. With the rebreathing method of administration, blood carboxyhaemoglobin (COHb) levels increased by an average of 3.4% in those receiving CO. Tests of six selected driving skills (brake reaction time, night vision, glare vision, glare recovery, hand steadiness and depth perception) showed small and individually insignificant deterioration in the group receiving CO. Grouping data in a non-parametric form there was a significant difference in the performance of experimental vs. control subjects. During operation of a driving simulator, the group exposed to carbon monoxide showed a highly significant deficit in skills related to careful driving habits. It is suggested that since a 3.4% increase of COHb is sufficient to affect the skills associated with safe driving, there

is a need to revise the permitted 8-hour industrial exposure level to 50 ppm.

by G. Wright; P. Randall; R. J. Shephard
University of Toronto, Dept. of Environmental Health,
Toronto, Canada
Publ: HS-016 942, Traffic Injury Research Foundation of
Canada, Scientific Session of the Annual Meeting (10th)
Proceedings, 1973 p67-76
1973 ; 11refs
Meeting held in Ottawa, Ont., Canada, 8 Jun 1973.
Availability: In HS-016 942

HS-016 954

DRIVER IMPROVEMENT CLINIC: A PROFILE OF PARTICIPANTS

A profile is provided of the North Carolina driver who is a participant in the driver improvement clinics operated under the auspices of the Division of Motor Vehicles. Information collected from 951 persons in the clinic was compared, first, with similar information on the entire licensed population of North Carolina, and, second, with comparable information from a sample of persons applying for driver license during the same time period that information was collected from clinic participants. In the latter comparison the control population was matched three for one to the clinic group on the basis of age, race, and sex. Findings included the following: males, nonwhites, and drivers under age 25 were overrepresented in the clinic population in comparison to the total licensed population, with nonwhite females underrepresented; both male and female clinic participants were underrepresented in the married category with the exception of males under age 25; professional, clerical, and semi or unskilled occupations tended to be overrepresented in the clinic population, while the skilled occupations were underrepresented; there were no significant differences on the basis of educational level; clinic participants reported significantly higher mileage driven during the past year than their matched controls; while in the control population, married drivers reported higher annual mileage than unmarried, there was no significant difference within the clinic group; within the clinic population married drivers reported less night and weekend driving than unmarried drivers; while most clinic participants came to the clinic via a conference with a hearing officer, younger drivers and women were more likely to arrive via the court system; unmarried drivers were also more likely to come through the courts; the greatest population of all occupational categories arrive at the clinic through a conference; for male participants there was a significant relationship between education and route of clinic arrival, with those with less than 12 years of education being more likely to come through the courts; drivers reporting lower mileage were more likely to come through the courts; persons who were self employed, held only one job during the year and those who drove little during the weekends were less likely to come through court.

by P. F. Waller; S. S. Padgett
University of North Carolina, Hwy. Safety Res. Center,
Chapel Hill, N.C.
1975 ; 59p 11refs
Availability: Corporate author

HS-016 955

SIMPLER CONTROLS WOULD MEAN SAFER CARS [HAND CONTROLS]

The development of hand controls to replace foot controls in cars is discussed. These controls range from electronic assisted acceleration/transmission and braking systems to electronic assisted steering (allowing the development of collapsible steering columns), and suspension systems. Hand controls are believed to enhance vehicle safety and driver comfort by reducing driver fatigue.

by Ken Garrett
Publ: New Scientist v65 n931 p68-9, 72 (9 Jan 1975)
1975
Availability: See publication

HS-016 956

DAWN BREAKS FOR AUTOMOTIVE ELECTRONICS

The use of electronic and computer systems in cars is discussed. The lean-burning engine and electronic ignition system of the Chrysler Corp. is discussed and compared with the computerized electronic fuel injection system of General Motors. The future of the automobile is seen to be closely tied to the use of mini-computers and large scale integrated circuitry, especially as regards fuel economy and emission control.

by Richard L. Waddell
Publ: WARD'S Auto World v11 n6 p33-4, 36 (Jun 1975)
1975
Availability: See publication

HS-016 957

CONSUMER INVOLVEMENT IN RULEMAKING

The Office of Consumer Affairs (OCA) of the Department of Transportation (DOT) held a workshop on consumer involvement in rulemaking, in order to help raise the level of responsiveness in this matter throughout DOT. Other objectives included an exchange of knowledge and experience as to the practical steps that can be taken for meaningful consumer involvement in rulemaking and the development of suggestions from which a set of recommendations could be made for DOT consideration. The recommendations were: that the DOT operating administrations utilize the notice and comment rulemaking procedures of the Administrative Procedure Act in procedural and substantive rules of general applicability relating to public property, loans, grants, benefits, or contracts which have a substantial public interest; that the operating administrations within DOT make the fullest practical use of the advance notice of proposed rulemaking; that, within DOT, the normal minimum time for public comment on a notice of proposed rulemaking following publication in the Federal Register be 45 days; that each DOT administration and appropriate secretarial office submit to the General Counsel (GC) and the OCA its policy and procedures for consumer involvement in rulemaking within 60 days from the receipt of the Secretary's memorandum, and a copy of any significant changes in policy and/or procedures be provided to the GC and the OCA; that by September 30 of each year, a brief report be submitted to the OCA highlighting successful activities and techniques employed during the course of the year by the administration or secretarial office to involve consumers in the

rulemaking process; that periodically the OCA compile a report of changes in policies and/or procedures and special activities and techniques for consumer involvement in rulemaking, and distribute the report through channels of communication accessible to consumers; and that each administrator and appropriate secretarial officer designate a member of his staff knowledgeable in that administration's or office's rulemaking procedures to work in a liaison capacity with the OCA in its work with citizen/consumer leaders and groups.

Department of Transportation, Office of Consumer Affairs,
Washington, D.C. 20590
Rept. No. PB-241 575 ; 1974 ; 38p 13refs
Availability: NTIS \$3.75

HS-016 958

THE NIGHT DRIVING LEGIBILITY EFFECTS OF DIRT ON ROAD SIGNS

The investigation of the problem of dirt on road signs involved the study of three subproblems: a study of existing dirt, its amounts and speed of accumulation on road signs in real traffic; a chemical analysis of the dirt that is accumulated on road signs; an experimental investigation of legibility distances to road signs covered with dirt layers of different thicknesses commonly found in normal traffic situations. Dirt was measured each week on small road signs mounted at different distances from the road. It was found that, under unfavorable conditions reduction of reflected light and of contrast went up to 75% and 95%, respectively. Dirt accumulation can, however, be significantly decreased by moving the road sign further away from the road side. Dirt was carefully collected from road signs and analyzed. The results showed that most of the dirt originated from the road surface. Legibility distances were measured to shoulder mounted road signs in various stages of dirtying. The signs were illuminated by car headlights or separate roadsign illumination, both external and internal. In night driving without separate sign illumination the results clearly showed a marked decrement in legibility caused by dirt. In daylight or separate illumination, however, the effects of dirt were very limited.

by K. Rumar; A. Ost
University of Uppsala, Dept. of Psychology, S:t Larsgatan 2,
S-752 20, Uppsala, Sweden
Rept. No. 164 ; 1974 ; 32p 10refs
Availability: Corporate author

HS-016 959

VISIBLE DISTANCE AND VISUAL GUIDANCE AS A FUNCTION OF SYSTEM ANGLE OF POLARIZED HEADLIGHT SYSTEMS

One of the problems with polarized systems is the choice of optimal polarization angle (Theta) between headlight polarizer and visor. Three system angles (0°, 45°, and 90°) are compared with regard both to visibility of the road and to visibility of obstacles on the road. The road situation is simulated in the laboratory and the results obtained are compared and validated in a full scale field test. In relation to the fact that different kinds of materials illuminated by polarized light and seen through a visor reach, on one hand, luminance and contrast minimum at the system angle 0°, and on the other hand, luminance minimum and contrast maximum at the system angle 90°, the following problems are stated: which of the three an-

gles require less illumination in reaching the threshold of contrast between the road materials shingle-gravel and shingle-asphalt; which of the system angles gives the longest distances to simulated luminance contrasts of the roadway materials in a realistic traffic situation with meeting polarized headlights; and which system angles gives the longest visible distances to obstacles made of cloth standing on the road in a realistic traffic situation with meeting polarized headlights. Four experiments are described, in which four subjects were used in the first, second and fourth, and eight in the third. Their ages ranged from 20 to 47 years and their visual acuity was greater than or equal to 1.0. The results showed that Theta00° gives the best visibility of obstacles on the road. The road visibility is not quite as simple a function of Theta. But on the whole, the conclusion is drawn that Theta00° is the optimal polarization angle between headlight polarizer and visor.

by Gabriel Helmers
University of Uppsala, Dept. of Psychology, S:t Larsgatan 2,
S-752 20 Uppsala, Sweden
Rept. No. Rept. No. 126; 1972 ; 63p 9refs
Availability: Corporate author

HS-016 960

EUROPEAN TYRE [TIRE] AND RIM TECHNICAL ORGANISATION [ORGANIZATION]-DATA-BOOK 1974-1975

Specifications are presented and recommendations made dealing with such topics as: automobile, truck and bus tires in relations to safety (including retreading and tire repair); dimensions, load capacities, speed limits, and sizes relative to passenger car tires; commercial vehicle tires; agricultural vehicle tires; bicycle, motorcycle, and motor scooter tires; industrial and fork-lift tires; solid tires; earthmoving equipment tires; tire valves and components for the various vehicles discussed; and tire rims for the various vehicles.

European Tyre and Rim Technical Organisation, Ave.
Brugmann, 32, 1060 Brussels, Belgium
1974 ; 982p
Text also in French and German.
Availability: Reference copy only

HS-016 961

(SCANDINAVIAN TIRE STANDARDS)

Scandinavian Tire and Rim Organization, Box 4179, 203 13
Malmö 4, Sweden
1975 ; 288p
Text in Swedish.
Availability: Reference copy only

HS-016 962

DEUTSCHE NORMEN [GERMAN STANDARDS FOR TIRES]

Tabulated are the German standards for the following types of tires: tires for motor vehicles, implements and trailers used in agricultural, logging and transport service; tires for low platform trailers, fork lift trucks and mobile cranes; tires for earth moving machines and tractor graders; tires for bicycles; tires for small and large capacity motorcycles; low and super low section tires for passenger cars and station wagons; super bal-

loon tires for passenger cars and station wagons; tires for light trucks and buses, for buses and their trailers, for tractors and their trailers, of radial and diagonal construction; rear wheel wide rim tires for agricultural tractors and implements; tires for front wheels of agricultural tractors; tires for industrial trucks; and tires for garden tractors. Also included are standards for different kinds of camelback compound used in retreading tires.

Deutscher Normenausschuss, Berlin 30, West Germany

1970 ; 80p

Text in German.

Availability: Reference copy only

HS-016 963

BRITISH STANDARD: AUTOMOBILE SERIES. SPECIFICATION FOR TYRE [TIRES] AND WHEELS. PART 1. TYRES

Tire specifications are presented for automobiles, commercial vehicles, agricultural vehicles, trailers and industrial vehicles, and motorcycle and scooter tires. Specifications for retreaded car and commercial vehicle tires are included.

British Standards Inst., 2 Park St., London W1A 2BS, England

1973 ; 147p

Section 3 (Off-the-road Vehicle Tires) not included. Section 144a (Retreaded Car and Commercial Vehicle Tires) is included.

Availability: Reference copy only

HS-016 964

JAPANESE INDUSTRIAL STANDARD [AUTOMOBILE TIRES, VALVES, RIMS, AND TUBES]

Japanese standards are specified for: automobile tire dimensions and load characteristics tire valves (as a unit and as component parts: stems, washers and grommets, valve nuts, cores, caps and packings), contours of rims, tire construction and materials, and tube quality.

Japanese Standards Assoc., 1-24, Akasaka 4, Minato-ku, Tokyo, 107 Japan

Rept. No. JIS-D-4202-1972; JIS-D-4207-1972; JIS-D-4208-1962; JIS-D-4209-1972; JIS-D-4210-1972; JIS-D-4211-1972; JIS-D-4212-1962; JIS-D-4218-1961; JIS-D-4230-1966; JIS-D-4231-1966; JIS-D-4232-1966 ; 1973 ; 94p

Availability: Reference copy only

HS-016 965

SINGLE-VEHICLE ACCIDENTS INVOLVING UTILITY POLES

From the limited data available it appears that utility poles constitute one of the major roadside hazards on our Nation's highways. The data indicate that utility poles are one of the most frequently struck fixed objects along the roadside. It is estimated that utility pole accidents account for more than 5% of the national traffic fatalities, or more than 15% of the fixed object traffic fatalities. Assessing and resolving the utility pole accident problem presents a formidable task. Contributing factors which make the problem difficult include sketchy accident statistics, lack of uniform standards and enforcement for

locating utility poles, insufficient legal authority for States to undertake corrective action, inadequate right-of-way in many areas, and the high cost of current solutions to the problem. These solutions include: joint use of poles by electric and telephone companies; removal of poles by the use of underground cables; and the utilization of breakaway poles.

by N. L. Graf; J. V. Boos; J. A. Wentworth

Publ: Public Roads v39 n1 p21-6 (Jun 1975)

1975 ; 7refs

Availability: See publication

HS-016 966

ON THE NON-LINEAR DYNAMIC RESPONSE OF THE RHESUS TO IMPACT

A non-linear discrete parameter mathematical model describing the dynamic behavior of a primate (Macaca mulatta) has been developed and programmed for solution on the IBM model 360/91 computer using the Continuous Systems Modeling Program. The primate is described by a system of discrete anatomical segments connected by translational and rotational springs representing the inter-segment stiffnesses. For example, the neck is represented by three discrete masses, one translational and four rotational springs. The masses, mass moments of inertia, centers of gravity and the neck axial stiffness, were obtained experimentally. The predicted dynamic behavior of the rhesus monkey to blunt head impact compares favorably with the observations taken from high-speed films of a cerebral concussion experiment. A study of the effect of the point of application and angle of inclination of the forcing function was conducted. The results show that the important response parameters display the expected sensitivity to the location of the blow but are particularly sensitive to its angle of inclination with respect to the plane containing the foramen magnum.

by S. B. Roberts; R. B. Thompson

Publ: Journal of Biomechanics v7 n6 p523-44 (Nov 1974)

1974 ; 12refs

Availability: See publication

HS-016 967

EVALUATION OF FIRST GENERATION UTCS/BPS CONTROL STRATEGY. VOL. 1. TECHNICAL REPORT. FINAL REPORT

The results of the evaluation of the alternatives of the first-generation traffic control strategy for the computerized Urban Traffic Control System and Bus Priority System (UTCS/BPS) in Washington, D.C. are presented. Five traffic control alternatives were evaluated to assess their relative impact on traffic during typical weekday morning, midday, and evening periods. The alternatives were: the D.C., three-dial traffic control timing plans (three-dial); first-generation control timing plans selected for implementation by time of day (TOD); first-generation control timing plans selected for implementation by a traffic-responsive pattern matching algorithm (TRSP); first-generation control timing plans selected for implementation by a traffic-responsive pattern matching algorithm and including a critical intersection control algorithm (CIC); and first-generation control timing plans selected as the two previous alternatives and including a bus priority system control algorithm (BPS). The evaluation effort included two parallel procedures. The first procedure was based on utilizing information gathered by

the surveillance component of the UTCS/BPS system itself. The second was based on moving car studies conducted throughout the control area. They were compared with each other and with applicable special studies to evaluate the procedures themselves. Approximately 250 detector locations were included in the surveillance system analysis. The moving car studies, including information on travel time, stops, and delays, were made on four routes in the area. Data were collected and a base case data set was developed for each of the periods of daily activity. Significant differences between alternatives were identified. No alternative provided consistently significant improvement over the TRSP. The greatest number of points where statistical differences were observed was the TRSP versus the three-dial comparison. On a network-wide basis, the differences in performance were relatively small. The CIC alternative had the effect of equally distributing delay on the approaches to a given intersection. The BPS algorithm appeared to work well when offset was not extremely critical for total traffic movement.

by J. L. Kay; J. C. Allen; J. M. Bruggeman
JHK and Associates, Suite 1112, 4660 Kenmore Ave.,
Alexandria, Va. 22304; Peat, Marwick, Mitchell and Co., 1025
Connecticut Ave., N.W., Washington, D.C. 20036
Contract DOT-FH-11-8242
Rept. No. FHWA-RD-75-27; 1975; 187p refs
Rept. for Feb 1974-Feb 1975. See also vol. 2, HS-016 968 and
Executive Summary, HS-017 323.
Availability: NTIS

HS-016 968

EVALUATION OF FIRST GENERATION UTCS/BPS CONTROL STRATEGY. VOL. 2. TECHNICAL APPENDICES. FINAL REPORT

A detailed discussion is presented of field studies, sample forms, and the documentation and user guides for the computer programs developed for processing and evaluating detector and moving car data resulting from the evaluation of five alternative control strategies.

by J. L. Kay; J. C. Allen; J. M. Bruggeman
JHK and Associates, Suite 1112, 4660 Kenmore Ave.,
Alexandria, Va. 22304; Peat, Marwick, Mitchell and Co., 1025
Connecticut Ave., N.W., Washington, D.C. 20036
Contract DOT-FH-11-8242
Rept. No. FHWA-RD-75-28; 1975; 193p
Rept. for Feb 1974-Feb 1975. See also vol. 1, HS-016 967, and
Executive Summary, HS-017 323.
Availability: NTIS

HS-016 969

AUTOMATIC TRUCK CAB WELDING FACILITY

The automatic cab shop at the Chevrolet-Flint Truck Assembly has many advantages over a conventional manual spot-welding shop. Not only was production increased but the dimensional quality of the cab is superior in the areas around the windshield, rear window and door rings. Two cabs on each shift are dimensionally checked on a surface plate. If there are slight variations in the sheetmetal, clamps and locating pins can be shimmed to produce the required dimensional quality. The quantity of welds in critical areas is insured by the electrical interlocks in the computer system, and the flexibility of both the mechanical and computer systems make alteration and additions relatively easy. Future pickup truck model

changes can now be made without expensive plant rearrangement and equipment installation.

by V. F. De Crausaz
General Motors Corp., Chevrolet Div.
Rept. No. SAE-750034; 1975; 7p
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-016 970

MOTOR VEHICLE STATISTICS OF JAPAN, 1975

The following statistics are provided: motor vehicles in use; new registrations; production, including cars by cylinder capacity and trucks by loading capacity; exports by both vehicle type and destination; imports by volume and country of origin; and motor cycle and scooter use, production, and export data. This data generally covers the years 1951 to 1974.

Japan Automobile Manufacturers Assoc., Inc., 30 East 42nd
St., New York, N.Y. 10017
1975; 27p
Availability: Corporate author

HS-016 971

RESTRAINT SYSTEM USAGE: A LITERATURE SURVEY

Thirty-three references on restraint system usage are listed and arranged in chronological order (earliest to most recent) according to the year the study was conducted. Data provided in these references was charted by year of study, region (or population base) of study, the method used to conduct the survey (interview, questionnaire, accident reports, or observation), years of automobiles surveyed, percentage of seat belt use, percentage of seat belt and shoulder harness use, day or night survey, and sample size.

by A. C. Grimm, comp.
University of Michigan, Hwy. Safety Res. Inst.
Rept. No. UM-HSRI-RI-75-2; 1975; 11p 38refs
Availability: Corporate author

HS-016 972

THE POTENTIAL REDUCTION IN CAR CRASH DEATHS THROUGH SAFETY BELT USAGE IN SASKATCHEWAN

An attempt is made to relate the value of safety belt usage directly to the personal experience of individual motorists in Saskatchewan (Sask.), so that people might be persuaded to use them. Data from over 5000 accident reports is used for injury predictions, taking into consideration the age and seating position of the occupant, the type of restraint (if any) that is used, and the vehicle deformation index (VDI). Injuries are rated using the abbreviated injury scale (AIS). Injury predictions derived in this study are applied to people fatally injured in accidents in Sask. In this way, it was estimated that, of the 318 fatalities, 199 occurred in accidents where seat belts could have affected the injury level. It is predicted that 95 would have survived. The potential benefits of safety belt usage would be even greater in injury producing accidents, since presently 35 people are injured for every one person killed in

accidents. Extensive information on the accidents studied is tabulated.

by A. C. Shiels
University of Saskatchewan, Transportation Center, Saskatoon,
Sask., Canada
Rept. No. USTC-R-75005H; 1975; 40p 2refs
Availability: Corporate author

HS-016 973

EFFECTS OF SONIC BOOM ON AUTOMOBILE-DRIVER BEHAVIOUR [BEHAVIOR]

Test results are presented on the response and behavior of automobile drivers subjected to sonic boom disturbances under actual driving conditions. A description is given of the design and development of a portable sonic boom simulator, auxiliary equipment and experimental techniques used to study the nature and severity of the disturbance effects. The sonic boom simulator, consisting basically of loudspeakers and a function generator was mounted inside a test vehicle. It was able to produce sonic booms that were very similar to what drivers would experience following SST overflights. The simulated booms had overpressures of three psf, rise times of about one millisecond and durations of 100 milliseconds. Twelve subjects were used; and two aspects of driving were investigated: the tracking maneuver and the stopping task. Results from both tests indicated that driver behavior was not affected by the simulated booms, even though some drivers considered it annoying or disturbing. It may therefore be concluded from present limited statistical tests that current commercial super-sonic aircraft under normal flight conditions (without super-booms) would not produce adverse effects on a driver's stopping distance or his ability to follow a particular course.

by O. V. Nowakowsky
University of Toronto, Inst. for Aerospace Studies
Rept. No. UTIAS-TN-188; 1974; 12refs
Availability: Corporate author

HS-016 974

THE ULTIMATE TIRE TEST: IS THERE SUCH A THING AS THE PERFECT TIRE?

Two automobile tire studies are reported and commented upon. One study was conducted by the Calspan Corp. and the other by the Highway Safety Research Institute (HSRI). The findings discussed are concerned with the following aspects of tire construction and performance: tire size; construction type; belt material; rim diameter; braking and cornering under laboratory and road conditions; tire inflation pressure; and tread wear. It is concluded that the ideal tire for the enthusiast would likely be a steel-belted radial of low-aspect ratio. Upsizing is suggested, because cornering stiffness increases with larger sizes. Calspan and HSRI results do not predict ride and tire life. There also seem to be few guidelines for wet performance, except for the desirability of deep and open tread design. Inflation pressure and tread depth influence tire performance; these conditions allow fine tracking adjustments, but it is suggested that only higher than factory-recommended inflation pressures be considered. The flatbed tire-tester used

by both Calspan and HSRI, and HSRI's mobile tire tester, are described.

by D. Sherman
Publ: Car and Driver v21 n1 p48-50, 52, 94, 96 (Jul 1975)
1975
Availability: See publication

HS-016 975

COMPULSORY SAFETY HELMET LEGISLATION AND MOTOR CYCLIST ACCIDENTS

On 1 December 1973 the wearing of safety helmets became compulsory for all motorcyclists in New Zealand. This report contains an analysis of fatal motorcyclist accidents for periods of one year before and after the introduction of the law. Relative risks of death factors were calculated for wearers and non-wearers of safety helmets using helmet wearing rate data. These factors were then used to calculate an expected number of motorcyclist fatalities for 1974. The actual number of motorcyclists killed in 1974 was about 40% lower than what would have been expected had past trends continued. A similar reduction in motorcyclist deaths was experienced in 1956 when the compulsory helmet wearing law applicable at speeds in excess of 30 mph was introduced. Although the safety helmet law was perhaps the major factor in the 1974 reduction, the Government's fuel conservation measures were also considered to have had some effect.

by C. Singh; S. H. Robson; J. B. Toomath
Ministry of Transport, Traffic Res. Section Wellington, N. Z.
Rept. No. Traffic-RR-8; 1975; 17p 4refs
Availability: Corporate author

HS-016 976

MOTOR CYCLE HELMET AND HEADLAMP CHECKS 1973

In December 1973, the wearing of safety helmets by motorcyclists became compulsory at all speeds. Prior to this the compulsion to wear applied only when speeds exceeded 30 mph. Checks of safety helmet usage after the extension to the law showed almost complete compliance. Before the law was introduced, the average helmet wearing rate was about 74% and this increased to almost 100% after the law's introduction. The most popular type of helmet was found to be the "jet" type, accounting for about 80%. The number of passengers decreased when the law was introduced, probably because many motorcyclists did not have or were not carrying a second helmet. Also checked was the proportion of motorcyclists using headlamps during the day, which was found to be of the order of 20 to 25%.

by C. Singh; S. H. Robson; J. B. Toomath
Ministry of Transport, Traffic Res. Section, Wellington, N.Z.
Rept. No. Traffic-RR-9; 1975; 11p 2refs
Availability: Corporate author

HS-016 977

ATTITUDES TOWARD DRINKING AND DRIVING IN NEW ZEALAND

The role of alcohol in traffic accidents in New Zealand is briefly reviewed and reference to relevant New Zealand data

is made. A publicity campaign conducted by the Ministry of Transport in 1974 and designed specifically to change community attitudes toward drinking and driving from that of general acceptance to that of making the practice socially undesirable is described. A preliminary survey undertaken to evaluate the campaign showed that social pressures currently acting to curb drinking and driving are weak and that this practice appears to be accepted by the New Zealand community as normal behavior. Alternative countermeasures (lowering the legal blood alcohol level and random blood alcohol level and random blood alcohol testing) to the problem of drinking and driving are examined and the conclusion drawn that penalties for drinking and driving must incorporate an element of rehabilitation.

by K. R. Parsons

Ministry of Transport, Traffic Res. Section, Private Bag, Wellington, N. Z.

Rept. No. Traffic-RR-10; 1975; 16p 25refs

Presented at the Sixth Summer School on Alcohol Studies, Massey Univ., Jan 1975.

Availability: Corporate author

HS-016 978

SHORT-TERM TRAFFIC "BLITZES"

The effects of a month long intensive traffic enforcement program conducted in Christchurch, a metropolitan area of population 280,000, are analysed. Reviewed are the long term effects of a similar program conducted earlier in Hamilton City (population 80,000). The plan and strategy of the "blitz", as the intensive traffic enforcement and publicity campaign was called, are discussed. The first objective of the Christchurch "blitz" was the prevention of accidents. In addition, it was hoped that undue public relations backlash against the Minister's traffic officers could be prevented. Television, radio, and press advertising was used in the publicity campaign and drivers were advised of current traffic law through newspaper summaries. The traffic force in Christchurch was increased from 86 to 139. Data were collected so that the program could be evaluated. Tables and graphs are provided. There were 23% fewer accidents during the "blitz" period than could have been expected without the "blitz". Traffic volume and bus usage data suggested that overall vehicle usage was not seriously affected during the "blitz". Traffic offenses increased, while parking violations showed a decrease. "Blitz" results in Christchurch and Hamilton City are compared and tabulated. In both cases, there was an improvement in driver behavior during but a reversion to previous habits soon after the "blitz". It appears that in both Hamilton and Christchurch the "blitzes" had some lingering effects. Available data suggests this could be on the order of six months in the case of Hamilton and two months in the case Christchurch. Accident comparisons are made, also, with control areas.

by J. B. Toomath

Ministry of Transport, Traffic Res. Section Private Bag, Wellington, New Zealand

Rept. No. Traffic-RR-11; 1975; 23p 9refs

Availability: Corporate author

HS-016 979

A CRITICAL EVALUATION OF THE LITERATURE ON "ALCOHOL INVOLVEMENT" IN HIGHWAY DEATHS

The actual number of alcohol-related traffic deaths is not known and even the best approximations are subject to question. An attempt is made to clarify some of the many exaggerated statements that are made about the involvement of alcohol in highway deaths. An evaluation of the official position on alcohol-involved fatalities with tabulated data used to support that position is provided. This data, however, when evaluated itself, does not stand up. It is suspected that the studies listed in the tables were selected because they support the official position, that alcohol is involved in half of all traffic deaths, and more competent studies ignored because they do not. An attempt is made to arrive at figures on the number of drivers and passengers who were influenced by alcohol at the time of their death, not by following the official assumption that if we determine the proportion of drunk to sober drivers responsible for vehicle crashes we can divide the passenger fatalities according to the same ratio, but by examining various studies, considering differences in methodology and the variety of reporting formats, making judgments on the adequacy of the data and arriving at an educated guess. Accident responsibility is investigated. Many indications of non-representative or inadequate data, which has the effect, of over-emphasizing alcohol involvement in traffic deaths, are mentioned. Finally, a tabulation of categorized estimates of motor vehicle deaths in the United States in 1972 and the portion that may have involved alcohol in some causal fashion is presented. Based on presently available data and allowing for differences in exposure (e.g. child pedestrians are more likely to die in the daytime and therefore less likely to be killed by a drunk) and for the likelihood that not all intoxicated victims are responsible for their own death, and that the majority of sober victims killed are responsible for their own death, it is estimated that no more than 36% of all traffic deaths involve alcohol in some causal fashion, rather than 50% or more.

by Richard Zylman

Publ: Accident Analysis and Prevention v6 n2 p163-204 (Oct 1974)

1974; 51refs

Availability: See publication

HS-016 980

PREDICTING INTERSECTION ACCIDENTS

A study undertaken to evaluate various models for the prediction of accident occurrence at intersections is described. In order to broaden the scope of the investigation and account for regional differences in traffic patterns and driver behavior, the study was begun simultaneously in four major Canadian cities whose geographic location would provide reasonable coverage of the country as a whole. A total of 59 non-signalized intersections (51 urban and 8 rural) in the four cities were selected for study. Teams, generally consisting of four observers, were stationed at the various intersections to record all conflicts and violations, and a supervisor checked and coordinated their efforts and approved final tabulation of the data. Variables considered were: traffic volumes; vehicular maneuver times; traffic conflicts and violations. Significant correlations were found between accidents and conflicts; accidents and intersection approach volumes; and accidents as a

tended to support the hypothesis that accidents and conflicts are related, the correlations achieved were not of a high order. It was found that the concept of vehicular conflicts, in its present form, is not likely to result in a viable tool for the analysis of individual intersections. A possible exception to this may be in the area of identifying hazard spots within an intersection. It was found that the best accident predictor models were those based on vehicular volumes. The inclusion of a time exposure factor, while not improving the over-all correlation, nevertheless gave indications of explaining some accident variance in situations where consideration of volume alone is insufficient.

by P. J. Cooper
Ministry of Transport, Road and Motor Vehicle Traffic
Safety, Ottawa, Canada
1973 ; 95p 22refs
Availability: Corporate author

HS-016 981

AIR RESTRAINT SYSTEM. NATIONAL CONSUMER RESEARCH STUDY

An evaluation of 84 Toronado, 184 Oldsmobile 98, and 207 Oldsmobile 88 1975 new car purchasers attitudes toward the Air Cushion Restraint System (ACRS) is made. Reasons for not buying the ACRS, and an evaluation of potential future volume implications for it, as either a standard or optional feature on General Motors automobiles, are presented. The degree of familiarity with the ACRS concept is measured and future purchase interest is evaluated. Telephone interviews were conducted, the respondents' names being selected by computer on an "nth" basis, from among new 1975 Oldsmobile model year owners. Thirty-seven percent of the owners perceived their cars as safer with the ACRS while 63% did not. Most, however, perceived it as generally beneficial. Only 9% of those owners interviewed stated their future purchase likelihood as "very likely". It is suggested that this finding points up the general lack of hard core evidence on the specific benefits, operation and costs of an ACRS installation. The majority of statements regarding reasons for not buying the Air Bag option were found to be grouped in 3 major categories: extra cost; apathy; and low confidence and reliability expectations. Interest in future purchase of the system was found to be highest at the \$100.00 price level but demand virtually vanishes with a \$300.00 alternative price. No more than 23% of those interviewed would agree that Air Bags "should be pushed hard for possible general use". It is concluded that data suggest a maximum future ACRS installation rate of around 23% to 33% at the optional cost of about \$100.00.

Market Res. Group, Inc., Farmington Hills, Mich. 48024
1975 ; 61p
Prepared for the Market Res. Dept., General Motors Corp.
Availability: Corporate author

HS-016 982

RAINFALL AND VISIBILITY--THE VIEW FROM BEHIND THE WHEEL. INTERIM REPORT.

Data and concepts are presented which will allow the development of preliminary criteria to reduce the danger of accidents due to marginal visibility. Objectives of research were these: to determine the frequency, duration and intensity of rainfall

in the state of Texas; and to determine the effect of different intensities of rainfall on driver visibility. It was shown that some degree of rainfall takes place 6% of the total time in Texas but that high intensity rainfalls are comparatively rare. An intensity of one inch per hour or more takes place less than 0.06% of the time. An approximate equation was developed for driver visibility which depends on the intensity of rainfall, the vehicle speed and the cyclic frequency of the windshield wipers. The options open to the highway engineer in designing for rainfall seem to be limited, although excellent drainage design would be helpful in reducing the indirect effect of vehicle spray. Conclusions are reached concerning the possibility of disallowing passing during rainfall and enforcing reduced speeds. It is shown that traffic speeds in excess of 45 mph are unsafe when passing maneuvers are performed during rainfalls of 1 in./hr.

by Don L. Ivey; Eero K. Lehtipuu; Joe W. Button
Texas A&M. Univ., Texas Transportation Inst., College Station, Tex.
Rept. No. TTI-RR-135-3 ; 1975 ; 61p 9refs
Rept. for Sept 1973-Feb 1975. Prepared in cooperation with the Federal Hwy. Administration, and sponsored by the Texas Hwy. Dept. Research study title: "Definition of Relative Importance of Factors Affecting Vehicle Skids."
Availability: Corporate author

HS-016 983

DRIVER LICENSING LAWS ANNOTATED. 1973 ED.

State driving license laws are compared with the driver licensing provisions of the Uniform Vehicle Code. Word and phrase definitions compared relate to: cancellation of driver's license; driver's license; highway; license, or license to operate a motor vehicle; motor vehicle; nonresident; nonresident's operating privilege; revocation of driver's license; state; suspension of driver's license; and vehicle. Comparisons in the issuance of licenses, expiration and renewal include: compulsory licensing; persons exempt from license; persons not to be licensed; classes of licenses; instruction permits and temporary licenses; license or instruction permit application; applications of minors; withdrawal of consent; examination of applicants; licenses issued to drivers; license to be carried and exhibited on demand; restricted licenses; duplicate permit of license; expiration and renewal of license; re-examination required; notice of change of address or name; records to be kept by the department; Medical Advisory Board; and reports by physicians and vision specialists. Cancellation suspension, or revocation of licenses comparisons deal with: authority of department to cancel license; suspending privileges of nonresidents and reporting convictions, suspensions and revocations; revoking or suspending resident's license based upon conduct in another state; when court is to forward license to department and report convictions; mandatory revocation of license by department; revocation of license for refusal to submit to chemical tests; authority of department to suspend or revoke license; department requiring re-examination; periods of revocation and suspension; surrender and return of license; no operation under foreign license during suspension or revocation in this state; and right of appeal to court. Comparisons on violation of license provisions relate to: unlawful use of license; making false affidavit perjury; driving while license suspended or revoked; permitting unauthorized minor to drive; and permitting unlicensed person to drive. Commercial driver training school laws and regulations are compared on: license required; definitions; exemptions; issuance and expiration of licenses and fees; authority of commissioner to adopt regula-

tions; refusal, suspension or revocation of license and penalties.

by John W. English
National Com. on Uniform Traffic Laws and Ordinances, 1776
Massachusetts Ave., N.W., Washington, D.C. 20036
Contract DOT-HS-107-1-153
1974; 432p
Availability: Corporate author

HS-016 984

FOR MORE SAFETY ON OUR ROADS: THE ROAD SAFETY PROGRAMME [PROGRAM] OF THE FEDERAL REPUBLIC OF GERMANY; "PEOPLE HAVE THE RIGHT OF WAY"

The pros and cons of the topical issues concerning traffic safety in Germany are dealt with. Presented are all the programs which the Federal Government is planning to implement in the fields of traffic education, legislative and executive action, technical equipment of motor vehicles, highway construction and highway traffic engineering, and emergency services. Discussion of the starting position includes: the statistical data; past efforts towards traffic safety; 100 km/hr speed limit; seat belt installation; law on blood alcohol concentrations; relative improvements in traffic safety since 1960; relationship between cost and effectiveness; no accident forecasts; and traffic safety responsibilities. With regard to traffic education, topics covered are: man as the main focus of accident prevention; more federal funding for traffic education; changing the approach to traffic; education of various groups of road users; education of the elderly and young drivers, and of pre-school age children; in-service training of teachers at teachers' seminars; traffic education in youth traffic schools, colleges, and vocational schools; education programs for professional drivers and foreign workers; and education on typical road hazards, drinking and driving, and safety belts. Discussion of driver licensing, traffic regulating, and other standards deals with: driving tests and driving schools; probation for beginners; temporary driver's licenses; a point system for repeated offenders; physical and mental fitness of drivers; medical interviewing of applicants for driver's licenses; vision tests for people over 60; medical examination of professional drivers; amendment of traffic code; introduction of conspicuous school bus signs; international harmonization of traffic regulations; statutory obligation to use safety belts; transportation of children; traffic surveillance; need for uniform standards in Europe; technical measures for preventing accidents and reducing their consequences; safety belts; head rests; laminated and tempered glass; reducing the hazards of vehicle interior design; and the experimental safety vehicle. Road construction, traffic control, and traffic engineering measures discussed are: road safety through construction, improvement and maintenance; separation of traffic; local accident black spots; lighting systems; alternating traffic signs; rail crossing safety; traffic planning; and traffic warning broadcasting service. Subjects examined under emergency services include: reorganization of emergency medical services; uniform state laws; use of helicopters; law relating to the transport of persons in ambulances; and emergency telephones on federal roads. Research areas mentioned include: coordination and intensification of accident research; major research targets; and other government-sponsored research projects. Statistics on accident development, numbers of accidents, numbers of peo-

ple involved, the casualties, and the accident causes are discussed and presented in tables and graphs.

German Federal Ministry of Transport
1973; 105p refs
Availability: Corporate author

HS-016 985

VISUAL PERFORMANCE STANDARDS FOR DRIVER LICENSING. PROJECT DESIGN

The design of a project to validate the initial findings of a study on vision and audition in driving, and to develop valid driver licensing standards for visual performance, is presented. The study indicated that through the use of an Integrated Vision Testing Device (IVTD) to test numerous visual performance factors, it might be possible to isolate that small percentage of drivers who present an extreme risk to themselves and others. Additional research is outlined, having the following specific objectives: the collection of reliable estimates of the relationship between vision tests and accidents; the investigation of practical alternatives for driver licensing administration and regulation, in view of potentially radical, new standards; and the acquisition of a body of knowledge which might lead to the treatment of deficiencies in the new visual performance factors. A state-of-the-art analysis is made. Based on the literature review that is presented, it is concluded that all present vision test standards, whether they are for static acuity, field of vision, binocular depth perception, or color vision, are based on what is plausible and reasonable, not on what is really required for the safe operation of a motor vehicle. The IVTD is described, which tests for the following functions: perception of movement in depth; perception of angular movement; useful peripheral vision; saccadic, pursuit and steady fixations; static acuity; and dynamic visual acuity. None of these functions, except static acuity, are tested under present licensing programs. A much refined and improved version of the device is being developed under the sponsorship of the National Highway Traffic Safety Administration, the Mark 2 IVTD. Using this device, it is proposed that data be collected for 20,000 to 30,000 test subjects. Eight IVTD's would be used, four in New York Department of Motor Vehicle offices on a random population and four on several pre-selected groups. Various systems analysis requirements will be associated with the project and several specific computer programs will be required. Appropriate questionnaires must be developed, test sites selected, procedures determined, personnel trained, public and private support enlisted, and time schedules determined. Guidelines for data requirements for the project are presented. The evaluation of the overall project is discussed. A major aspect of the research effort, the referral program for drivers with extremely poor visual performance, will be concentrated on. Practical alternatives available to driver licensing officials as a result of the research effort will be determined.

Safety Management Inst.
Contract CS4385
1974?; 63p 95refs
Prepared for the New York State Dept. of Motor Vehicles.
Availability: Department of Motor Vehicles, State of New York, Albany, N.Y. 12228

HS-016 986

RELATIONSHIP BETWEEN WHOLE-BODY VIBRATION AND MORBIDITY PATTERNS AMONG MOTOR COACH OPERATORS [BUS DRIVERS]

The long-term effects of whole-body vibration on the health of 1448 interstate bus drivers were investigated on the basis of the morbidity information extracted from the periodic physical examination of records of these drivers. Chi-square tests of the prevalence of specific chronic conditions for the study group and two comparison groups showed a number of significant differences in their morbidity experience. The three groups were composed of: an internal control group of 560 bus drivers with less than five years of professional driving experience; a general population of 2452 adult males interviewed and examined during the National Health Survey 1960-1962; and of 530 male office workers of a large insurance company employed in sedentary occupations. The study population was composed of the 1448 drivers, whose ages ranged from 25 to 64 years and whose experience ranged from less than one year to 35 years of bus driving. The health histories of these four groups were compared, specifically: nonpsychotic mental disorders; disorders of the circulatory, respiratory, digestive, genitourinary, and musculoskeletal systems; and disorders of the skin and subcutaneous tissue. The periodically fluctuating intra-abdominal and colonic intraluminal pressures, produced by bus vibrations, have been postulated as being partially responsible for the development of some diseases observed to be unduly frequent among bus drivers with more than 15 years of service. Occupational exposure to whole-body vibration could have contributed to a number of venous, bowel, respiratory, muscular, and back disorders. The combined effects of body posture, postural fatigue, dietary habits, and whole-body vibration cannot be ruled out in considering etiological causation for these disorders.

by G. J. Gruber; H. H. Ziperman
Southwest Res. Inst., San Antonio, Tex. 78284
Contract DHEW-HSM-99-72-047
Rept. No. HEW-Pub-(NIOHS)-75-104; 1974; 60p 33refs
Availability: Office of Technical Publications, National Inst. for Occupational Safety and Health, Div. Post Office Bldg., Cincinnati, Ohio 45202

HS-016 987

ACCIDENT PRONENESS AND DRIVER LICENSE PROGRAMS

The fallacies in current methods of prediction of accident proneness are pointed out. There has been a tendency, because of a certain philosophical or political appeal, toward the creation of percentages which reflect a very small number of drivers causing the great number of fatal accidents. These numbers, however, are based on past events. For example, 7% of drivers may have accounted for all of one year's traffic accidents, obviously a low probability event, but there is no reason to believe that this same 7% will have a great tendency to have accidents the following year. The statement that 2% of drivers cause 50% of fatal crashes may have a certain appeal but when the actual frequencies are examined one finds that it is 2 million drivers causing 29 thousand accidents. So if one hopes to deal with that "small" group that causes so many ac-

preditors. A mathematical model was developed and a computer was used to create hypothetical accident distributions having higher correlations. The hypothetical frequency distributions that were created were given Spearman rho values. Not until the level of 0.76 was reached did the prediction begin to look good. In that case 11% of drivers cause 79% of the accidents, and 78% of those predicted to have accidents would have one in the next two years. This contrasts with the actual data in North Carolina (the area of study) in which 11% of the drivers accounted for 21% of the accidents later. The ability to predict accidents in the driving population is poor. The problems are not caused by a few, but by every normal but fallible driver.

by B. J. Campbell; D. Levine
University of North Carolina Hwy. Safety Res. Center, Chapel Hill, N.C.

1973; 12p 7refs
Presented at the 1st International Driver Behavior Res. Conference, Zurich, Oct. 1973.
Availability: Reference copy only

HS-016 988

OVERTAKING PERFORMANCE UNDER CONTROLLED CONDITIONS

An experimental study of the overtaking maneuver carried on in Great Britain and in Sweden is reported on. The emphasis is on the safety point of view. 100 drivers in each country were randomly chosen for the study. They were asked to overtake a laboratory car, at the latest time that they considered to be safe for the maneuver, as another laboratory car approached them in the oncoming lane. Each driver performed the passing maneuver 12 times at speeds that varied both for the overtaking and the oncoming car. A special apparatus was constructed for the registration by which time/distance diagrams could be in turn constructed. The dependent variables such as time margin, distance margin, subjective margin, total overtaking time, closing in distance, etc., were noted. The drivers discussed the test afterwards. Not all of the drivers could carry out each maneuver. It was concluded that by all indications, the behavior of the drivers corresponded to their behavior in normal traffic, that large differences in speed between opposing cars could be dangerous in overtaking situations, that this type of test could be of definite value in finding drivers with problems, and that such problems could be corrected by the learning process resulting from retesting. Thirty graphs are supplied, fully recording the variables and the process of the testing.

by Kare Rumar; Ulf Berggrund
The Traffic Safety Res. Group, Dept. of Psychology, Univ. of Uppsala, Sweden

Rept. No. PS-2-4; 1973; 56p 12refs
Presented at the 1st International Driver Behavior Res. Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-016 989

AN EXAMINATION OF THE RESULTS OF SOME OBSERVATIONS OF DRIVER BEHAVIOR

four countries (West Germany, Italy, France, and the United Kingdom), and consisted of measurements of the behavior of 100 drivers in each country on each of that country's routes. Driving behavior was classified as safe or unsafe on each of the routes, the classification unsafe being given to the drivers who committed more than one risky maneuver. This data analysis showed that: the correlation between the assessments of individual's driving behavior as safe or unsafe on the two routes was low in three of the four countries, insufficient for reliable assessment in the fourth; drivers who were given adverse markings for their driving behavior had, as a group, only slightly worse accident records than the group of drivers without any adverse markings; drivers who were given adverse markings on one route had, on average, about twice the number of adverse markings on the second route; there were appreciable correlations between the driver's use of signals, between their use of rear-mirrors and between their journey times on the two routes; drivers under 26 years old tended to drive faster than medium aged drivers while drivers over 60 and women drivers tended to drive more slowly; power/weight ratio expressed as cc of engine capacity per kg. weight of car tended to raise the driving speed by 3 - 9 mile/h per cc per kg. and car age resulted in lowering of speed of 0.4 - 0.9 mile/h per year of car age. There were high correlations between the driving behavior of individuals on the two routes but much longer journeys, chosen so as to produce larger numbers of incidents, would be required to give hope of accurate assessment of the relative performance of individual drivers.

by R. J. Smeed
University College, London, England
Rept. No. PS-2-e : 1973 : 11p
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-016 990

OVERTAKING BEHAVIOUR [BEHAVIOR] UNDER NORMAL TRAFFIC CONDITIONS

A research team has shown that a main difference between drivers who have a poor driving record and groups of drivers who have a better driving or accident record is the risks taken while driving. The overtaking situation often involves a great deal of risk and many accidents take place at these times. Study was made in France, West Germany, Italy, Sweden, and the United Kingdom with the aim of observing certain aspects of driver behavior - and especially overtaking behavior - under normal traffic conditions to see whether any relationships could be discovered among these aspects of driver behavior. In each country 100 drivers selected at random from lists of current license holders took part in the experiment. Data were recorded on the following items: sex, marital status, age; age full time education ceased; standard of education reached; engine capacity of car; year of manufacture of car; number of years of driving experience; average annual mileage; number of days driving per week; how long the car had been owned; number of traffic accidents and convictions; and reasons for traffic convictions. Two on-the-road methods were used; one in which two observers observed driver behavior in general, the other in which they were concentrated totally on overtaking behavior. Findings varied but some were in common: males overtook more often and faster than females; more experienced drivers overtook more often; drivers with prior convictions overtook more often; those without convictions used rear-mirrors more often and gave more signals;

drivers overtaking less safely generally had more powerful cars and more experience.

by S. W. Quenault
Transport and Road Res. Lab., Dept. of the Environment,
Crowthorne, Berks., England
Rept. No. PS-2-d : 1975 : 35p 3refs
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-016 991

RESEARCH INTO DRIVER BEHAVIOUR [BEHAVIOR]

In an attempt to assist the International Driver Behavior Research Association to decide their future research policy, an analysis has been made of the current and recently completed investigations on driver behavior. In addition, some suggested investigations are offered: into the numbers of traffic violations of various kinds; standards of road behavior and of risk taking; the effects of special law enforcement campaigns on driver behavior and attitudes; driver reaction to the enforcement of traffic legislation; knowledge of correct driver behavior; the recognition of dangerous situations; the speed of vehicles negotiating a sharp bend; the nature of accident black spots; the relation between violations and accident rates; the effect of warning letters; and the organization of the research. Included is a list of driver behavior investigations being conducted by association members. The list provides a subject description and the investigator and nationality, with subjects classified under the following topics: driver personality; personality characteristics; physiological and psychological characteristics; driver classification; social attitudes; perceptual motor characteristics; spatial including visual perception; sensorimotor reactions; driving skill; comprehension of driving situation; spare mental capacity; decision making ability; driver fatigue; alcohol and drugs; emotional state; vehicle and accessories; road features and intersections; traffic; weather; noise and vibration; emotion-causing features; driver performance; acceleration; speeds; headways; where drivers are looking; risk taking; violations; accidents; accident type and frequency; accident causes; remedial measures for drivers; propaganda; writing letters to drivers; group discussions; regulations; presence of police; enforcement; points system; warning by such means as radio or signs; improvement of road and vehicle; general remedial measures; driving simulations; and on the spot study of accidents.

by Reuben J. Smeed
University College, London, England
Rept. No. PS-3-b : 1973 : 47p 13refs
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-016 992

THE EFFECTS OF DIFFERENT [MASS COMMUNICATION SAFETY] CAMPAIGN COMPONENTS UPON BEHAVIOUR CHANGE IN ROAD USERS

The procedures and results of two experimental studies dealing with the differential aspects of design features of message content in mass communication traffic safety campaigns are

described. The first of the two studies attempted to compare the effects of a television message that explicitly shows the possible consequences of drinking and driving with another message, much the same, that is more explicit in what it shows. People of different educational backgrounds, 78 factory workers and 60 college students, were used in the study. Each subject was randomly allocated to one of three experimental conditions: explicit, implicit, or no communication. Questionnaires were administered (tabulations are provided) and, as in the case of the television message, the crucial items in the presentation were imbedded in a larger format on the subject of general traffic safety behavior. The second study was designed to compare the effectiveness of a mild fear arousal with an esteem oriented verbal motivator. Large signs, with a message to drivers that they use headlights night and day, were placed on a main route in an Ontario city. The signs or billboards were varied between the fear and the esteem motivation types. A total of 3,295 vehicles were observed. In both studies, it was desired that the immediate effect and the attitude change some time after the presentation be tested. In the first study, the explicit version of the message had greater short term effects and the implicit version had greater long term effects, both regardless of the educational level of the participants. In the second study, the incidence of headlight usage declined significantly over the course of the eight-week period of it. No real difference was found in headlight usage rate between the fear appeal and the esteem appeal conditions. Usage was, however, found to be significantly related to various aspects of weather conditions.

by G. J. S. Wilde; I. D. R. Brown; L. J. Caké
Queen's Univ., Dept. of Psychology, Kingston, Ont., Canada
Rept. No. SM-6-f; 1973; 16p 24refs
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-016 993

INFLUENCES OF ALCOHOL UPON CONTROL-RESPONSE TIMES AND BRAKE PRESSURE MODULATION DURING SIMULATED PASSING

Sixteen subjects drove an instrumented car in a simulated passing maneuver that involved emergency control-responses in an abort situation, as well as the more relaxed control responses associated with return-to-lane procedures. Driving was accomplished on one practice day and two test days, and following ingestion of an alcohol and a placebo beverage. The influence of alcohol upon brake and steering behavior were examined. A small, but statistically reliable increase in control-response times was obtained with blood-alcohol concentrations (90 mg%) which averaged slightly below the amount suggested by the federal government as the presumptive level of impairment (100 mg%). In addition, it was shown that alcohol effects extend beyond response time and affect the manner in which the controls (i.e., brakes) are actually used in such a way that, whether as a compensation for perceived increases in response times or decreases in control use sensitivity, the shape of brake pressure function is changed to show a decrease in rise

time from the onset of brake pressure to the point in time at which maximum brake pressure is produced.

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HS-016 994

A MARIJUANA DOSE RESPONSE STUDY OF PERFORMANCE IN A DRIVING SIMULATOR

A double blind examination was made of the effects of three doses of marijuana (50, 100 and 200 mg delta-9 THC/kg of body weight) and a placebo upon performance in a driving simulator. The experimental design used 23 subjects exposed to four treatments in 6 replications of a 4x4 Latin square design. The subjects were males between 21 and 32 years of age with a mean age of 24 years. Only subject-applicants with at least ten prior experiences with marijuana were accepted. Applicants currently using marijuana more than three times a week or with a history of extensive use of other drugs were excluded. Subjects were scored on variations in speed, acceleration, braking, steering, and tracking. In addition to basic road responses, drivers were given a subsidiary task to perform, to present the driver with a demand for joint information processing similar to that found in actual driving. It required one of four possible lever responses corresponding to four possible light signals. If an incorrect response was made to the appearance of the light, it was recorded but the light remained on until either a correct response was made, or ten seconds had elapsed. The reaction time recorded was for the final correct response only. Subjects were given two cigarettes to smoke in a time period of 20 minutes with inhalations at 35 second intervals and smoke held in the lungs for 15 second periods. The data provided no evidence that marijuana significantly affected the car control performance as measured by the UCLA driving simulator. The data did suggest a dose-related impairment of reaction times to the subsidiary task. There appears to be strong evidence that marijuana interferes with the perceptual aspects of driving, the monitoring of the environment. A comparison of the effects of alcohol and marijuana on the driving task reveals striking differences in the nature of their effects, not merely the degree. The probable accident potential of marijuana in comparison to alcohol depends on the importance given to the measure under investigation. It is concluded that, with commonly used dose levels, alcohol has a greater detrimental effect on driving than marijuana.

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HS-016 995

EXPERIMENTAL INVESTIGATIONS OF ALCOHOL INFLUENCES UPON ATTENTION AS A CRUCIAL FACTOR IN HIGHWAY CRASHES

The paper represents a step in the development of a behavioral model-based upon the psychological concept of attention—to account for the contribution of alcohol to highway crashes. It deals with its topics in the order of accidents and alcohol, attention and alcohol, and accidents, attention and alcohol. Alcohol is found to be a neuro-depressant, an inhibitor to the functioning of the reticular activating system which bears primary responsibility for the relative level of arousal, and a reducer of selectivity. Three generalizations can be offered concerning the three levels of possibly inadequate functioning in the immediate pre-crash phase: medium blood alcohol concentrations (i.e., 80 to 100 mg per 100 ml) are associated with reduction in available attention; medium blood alcohol concentrations (BAC) are associated with reduction in speed and quality of central information processing; and medium BAC's have relatively little influence upon the purely motoric aspects of responding. Both medium and high BACs substantially reduce driving efficiency and were shown to severely reduce performance on a recognition sub-task which required a choice between four mutually exclusive, gross motor responses. Selective attention is more readily impaired by alcohol than is intensive attention. Therefore, the stage is set for an alcohol-induced accident if, for example, the drinking driver is highly focused on one task and is therefore unable to monitor the rest of the environment selectively for cues of impending danger. His disadvantage is further compounded if the relative difficulty of the driving increases or if his previous experience with the demands of the task is lacking. The younger driver who has been drinking suffers enormous disadvantage even at lower BACs due to reductions in arousal, in selectivity, and especially in his attentional ability to reject irrelevant cues.

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HS-016 996

SOME DETERMINANTS OF SAFETY MINDEDNESS: THE ATTITUDES OF HIGH SCHOOL STUDENTS TOWARD TRAFFIC SAFETY

A survey was conducted of 3,058 students of three high schools in Japan to analyze the awareness of these students and their attitudes toward traffic safety in order to ascertain the study level on traffic-safety rules and knowledge in a scientific and systematic manner. The survey consisted of a factual survey on traffic safety with questions concerning the acquisition of driver's licenses, the type of license desired for acquisition in the future, the type and number of motor vehicles owned by the family of the student, the purpose for driving motor vehicles, and the actual situation of traffic accidents; a survey on the awareness and attitude toward traffic safety, on the importance of observing laws and regulations, on the relationship between mental readiness and safe driving,

ship to the automobile-dominated society; and a survey on the rules and knowledge of traffic safety concerning pedestrians, bicycles, motorcycles, and four wheel motor vehicles. Inquiry was made into the relationship between actual safety behavior and knowledge, attitude, and awareness in regard to traffic safety. It was concluded that traffic safety education has deep connection with traffic situations and safety awareness within each country. It was proposed that a cross-cultural study be made to grasp the mutual relationship between awareness and attitude on traffic safety with cultural difference.

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HS-016 997

SYSTEM, CURRICULA AND EFFECTS OF SAFE DRIVING EDUCATION PROGRAM FOR YOUNG MOTORCYCLISTS

A safety education program for high school students (16-18 years of age), part of a two and a half year program of motorcycle safety education for people of all ages, is reported. It was found necessary to teach scientific theories to those who lacked knowledge and practical training to those who lacked experience. The curriculum was divided into two sections, theory and practical training. The theory instruction included the following areas of emphasis: characteristics of motorcycles; fundamentals of safe driving; motorcycles and environment; safe driving and physiology; inspection and maintenance; motorcycles and simple physics; and an instructional film. The practical training included: gymnastics; inspection of vehicle and apparel; familiarization; riding posture; demonstration and training of proper braking; and demonstration of slalom riding and training. Instructors participate in the safety education program for high school students as instructors of extra-curricular activities and safety leaders also take part by making contacts with high school students outside schools at such places as dealers' shops. The example of Yamagata Prefecture is reported, giving detailed data of the results of the program. Honda supplied instructors and designed the curriculum for Yamagata. Following the education program there the number of accidents involving high school students showed a decrease for the first time in history. Traffic accident statistics are given by accident type, pre-crash maneuver, fatalities, injuries, year, motorcycle rider age, and helmet usage. Statistics are from Tokyo Metropolis, national figures for Japan, and the Yamagata Prefecture.

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DOES KNOWING MORE ABOUT DRIVERS HELP IN EFFORTS TO MAKE THEM SAFER?

The issues involved in determining how evidence regarding driver characteristics is to be used are discussed. Areas of interest that are discussed and questioned include: the definition and determination of the "accident" itself; past and/or future accidents and the idea of accident proneness; skill in driving tests and the actual efficiency of those tests; the relation of vehicle characteristics to accidents; driving characteristics and accidents; and personal driver characteristics (eyesight, extraversion, ability to do minor repairs, intelligence and mechanical comprehension), and their relation to accidents. It is suggested that a more systematic use of research findings might be worth while. More than one predictor could be applied. More attention should be given to the remedies available and less dependence should be placed on intermediate criteria. Follow-up studies of subsequent accidents are emphasized. It is concluded that the researcher can also contribute to accident prevention by applying research methods to testing the efficacy of the remedies and that techniques such as those developed in social and market research could work well for that purpose.

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Rept. No. SM-4-g; 1973; 8p 6refs
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HS-016 999

PREVENTION OF ROAD ACCIDENTS TO CHILDREN, PEOPLE OF OLD AGE AND THE HANDICAPPED THROUGH DRIVER EDUCATION

Children, old people and the handicapped are said to belong to a common group called "the handicapped in traffic." Lacking the psychological and/or physical prerequisites which a normal adult possesses, they do not have the same chance to cope with the complicated environment of traffic. A report published in 1972 by the Council of Europe is cited which, in effect, puts the blame for child accidents on the children. It is stated that even the best traffic education does not have an immediate effect on children, and that, according to investigations, children lack the ability of adults to cope even as pedestrians in the traffic of today until they are about 12 years old. It is maintained that it is just as inadequate to put the blame on the aged and the handicapped who are forced to be road-users of today. A survey of accidents involving 182 children in age groups from 1 to 10 years is reported. Again, it is stated that the behavior of children in traffic is not easily predicted. The drivers in the study did not know how children can be expected to behave in traffic. Accordingly, they paid far too little attention to the children or they misinterpreted the child's behavior. The problems of old people in traffic are numerous. For instance, they move slowly, and they often lack balance and physical judgement. It is stated that because of the lack of respect shown by drivers to pedestrian crossings these have become veritable death-traps for old people. Any unprotected road user has a handicap, but the degree of that handicap can vary. It is concluded that it is necessary to give all aspirants for driver's licenses thorough education in what they can expect from these three groups of road users, rather

than attempting to educate the users. It is recommended, also, that holders of new licenses should attend obligatory revision courses in this subject after two or three years so that the accident peak can be flattened out.

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Availability: Reference copy only

HS-017 000

BACKGROUND RESEARCH FOR THE DEVELOPMENT OF PROGRAMMING FOR THE CONVICTED ALCOHOL IMPAIRED DRIVER

The kinds of preliminary research initiatives needed prior to the establishment of a re-educative-rehabilitative program for the convicted alcohol impaired driver of a motor vehicle are discussed. Stressed are the kinds of data which need to be covered in the information gathering process, which can and must have a formative influence on the remedial program which is subsequently developed. Suggested steps on the way to developing an adequate program for the convicted impaired driver include: an "opinionnaire-questionnaire" type study involving a representative group of people who by virtue of their professions, training, and/or background experience are particularly knowledgeable about the local impaired driving scene; adequate statistics on the need and feasibility of the program; a survey of all impaired driving convictions in the particular area: specifications of the number of program units needed and the best site to set up a pilot program; and a profile of the convicted impaired driver, constructed from driver record files. It can be anticipated that convicted impaired drivers will be predominantly young males, that they will have a record of other non-alcohol related traffic violations, that a significant portion of those for whom the program is developed will be repeat offenders, and that the obvious and accepted indicators of social instability will not fit as far as these offenders are concerned. Programming developed from such preliminary research initiatives is not an outgrowth of abstract theorizing, but is rooted on a sound reality base which contributes much in ensuring its adequacy and needs-meeting potential.

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HS-017 001

MODELS OF DRIVER BEHAVIOR IN CRITICAL SITUATIONS: IMPLICATIONS FOR LICENSING, TRAINING AND RESEARCH

The feasibility of developing procedures to measure driver decision making performance and the feasibility of improving that performance through training are studied. It was first necessary to provide definitions of both the driving task and driver decision making in a form that would render these concepts amenable to conceptual analysis within the framework of a strong theoretical statement. The basic psychological litera-

HS-017 002

ture, both experimental and theoretical, was approached for the purposes of integrating the empirical findings from that literature with driver behavior literature and beginning the development of a consistent theoretical statement relating individual characteristics to failures of the driving task. A taxonomy of critical situations where driver decision making was found to be important in accident avoidance or occurrence was created. Techniques and devices which were potential candidates for measuring driver decision making performance were reviewed. During that extensive review of the literature it became apparent that there were many technical and theoretical flaws in much of the past research. The results of previous analyses of the feasibility of improving critical decision making performance through driver training formed the basis for a classification-training-cost-benefit model which was specifically implemented to guide policy in this area. In conclusion, strong emphasis is given to: the differential elimination of individuals from the driving system would have a very low payoff, but the differential classification of individuals for the purpose of diagnostic treatment is likely to yield a good return; such a classification system must be based on individual characteristics which are causally related to the successful performance of the driving task; it is imperative that accurately measurable criteria be developed which are based on involvement in hazard in various critical situations; the task of driving an automobile is seen as a highly complex perceptual-motor task and skill training for that task must take place at a commensurate level of complexity unless data clearly exist that some lesser level will accomplish the same result; and the sheer volume of information which must be considered in making policy judgement in the traffic safety area is so immense that substantial benefit is likely to be realized from the careful use of formal cost-effectiveness evaluation models.

by Gerald V. Barrett; Ralph A. Alexander
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Conference, Zurich, Oct 1973. Based on "Analysis of Performance Measurement and Training Requirements for Driving Decision Making in Emergency Situations," by the authors and J. B. Forbes.

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HS-017 002

DRIVER BEHAVIOR-NEWLY QUALIFIED DRIVERS

A method of systematic observation of driver behavior was used to compare items of driving behavior from groups of newly qualified drivers, to see if information could be obtained on how drivers developed their driving patterns as they gain experience. Five groups of 40 drivers drove around a 16 mile assessment route under normal traffic conditions. The groups were composed of drivers with 1, 13, 26, 39, and 52 weeks' experience after passing the official driving test. Personality tests, intelligence tests and subject data sheets showed no significant differences between the groups. Subjects drive in their own car accompanied by two observers. Average speeds in 30 mph and derestricted zones tended to become higher and car control tended to improve as the time following the official test increased. Most of the drive indices (use of rear view mirror and signals, standard deviation of speeds in the 40 mph and the derestricted zones, unnecessary maneuvers, and near-accidents) from the newly qualified drivers differed from those obtained from a random sample of

drivers. When compared to the 363 drivers chosen at random, fewer of the newly qualified drivers were assessed as driving safely, but with increasing experience the proportion increased and tended toward that of the random group. The result is consistent with the reduction in the accident rate of drivers with increasing experience.

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HS-017 003

HEALTH OUTCOMES FROM MOTOR VEHICLE ACCIDENTS AND THE AVAILABILITY OF HEALTH SERVICES SYSTEM RESOURCES

The relation of the availability of selected health services system resources to the health status from motor vehicle accidents on a national level is examined. Mortality from motor vehicle accidents was utilized as the health status measure. The explanatory variables included in the study were measures of: health services manpower resources; health services financing resources; health services facilities resources; and sociodemographic factors. All variables that were population ratios were per 100,000 civilian resident population. The State formed the basic unit analysis. A motor vehicle accident mortality rate (MVMAR) per 100,000 civilian resident population of the State was used as the dependent variable or outcome measure. The mortality was registered at the State of residence of the deceased. Data for the variables for each of the 48 continental States for each year, 1950, 1960, and 1966 was based, for the most part, upon total population surveys that were available from published sources. To allow for unit free comparisons, the regression coefficients were converted into units of standard deviations. The difference in the magnitude of the MVMAR's between the states was approximately 7 times in 1950, 6 times in 1960, and 3 times in 1966. The net effect of variables of the same type was obtained by summing the standardized coefficients of each of the variables that were in a particular category. The net effect of all the health resources variables studied changed from indirect in 1950 to direct in 1960 and was more direct in 1966. The greatest indirect and direct effect of any variable on MVMAR in each of the years in the all-variable equation was by facilities variables. Results provide some support for the hypothesis that health services systems resources are, in general, directly related to motor vehicle accident mortality. In the structure-process-outcome formulation, this would mean that the process of care for the system is not effective in favorably modifying MVMAR. It is recommended that further study be pursued by examining other health outcomes, such as morbidity and disability, and smaller geographic areas with emphasis on specific types of health resources and the quality of services actually provided.

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HS-017 004

DRIVER RISK TAKING: THE DEVELOPMENT OF A DRIVER SAFETY INDEX

An attempt is made to measure a driver's risk acceptance behavior in a real driving situation, within the framework of his visual, perceptual capability and his driving skill ability. Four subjects were used in the Driver Safety Index (DSI) experiments. Three of the subjects were 16 year old female school students with very little driving experience. The other subject was a 25 year old experienced male driver. An approximately 1000 feet long, 15 feet wide, paved, straight, dead end service road was used to conduct all the DSI experiments. The experimental arrangement for the perception and risk acceptance experiments consisted of a gap placed at the midway point of the road. The gap was bordered by a 1970 Buick Electra with its front end facing the front end of the experimental car and a 4 foot high, 4 inch square, black and white wooden post. Different gap sizes were obtained by positioning the post closer or further away from the Buick. The experimental car was parked in front of the gap at distances from the viewer's eyes of 46 feet, the minimum safe stopping distance when approaching at 20 mph, and 300 feet, the upper limit at which gaps had influence on the driver's information seeking activities at 20 mph. Styrofoam plates and a styrofoam post were used to simulate the Buick and the wooden post in the driving skill experiments. Tire track measurements obtained from wet rubber mats used to determine the relative gap position of the experimental car for each gap run. Each subject was given a two hour introductory field session before the perception and risk acceptance experiments. Two experimenters were used; one in the car with subject, one at the gap. The subject was instructed and his or her gap judgments and risk acceptance decisions were recorded by the experimenter in the car with the subject. The experimenter at the gap recorded judgments at the gap and varied the gap width. There were 60-100 gap presentations per subject. The mean and standard deviations of the psychometric functions were estimated. In the driving skill experiments, the gap was always set at 90 inches (10 inch clearance for the car) and the speed was 20 mph. The gap was approached from both sides. Three experimenters were used; one at the gap recording tire tracks and repairing and recording damage, the other two in the car with the emergency dual braking system and television and recording equipment. The subject was instructed and 40 to 50 trials were run. It was found that: the DSI methodology was successful in detecting large DSI differences among the individual drivers when tested under the same experimental conditions; the two drivers who exhibited a low DSI under the 46-foot viewing distance exhibited again a low DSI under the 300-foot viewing distance, while the two showing higher DSI at 46 feet showed higher at 300 feet; the obtained standard deviation estimates for the psychometric risk acceptance functions were generally only slightly larger than the obtained standard deviation estimates for the corresponding psychometric visual perception functions; and that the gap clearance drivers consider as safe to drive through seems to be a rather stable and distinct quantity in their minds. It is tentatively concluded that the DSI methodology appears to be a promising tool for classifying drivers with respect to their risk taking behavior.

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HS-017 005

EFFECTS OF CHANGES IN DRINKING, HOSTILITY, AND ALIENATION ON DRIVING OF YOUNG MEN

The results of a sample analysis of how drinking behavior and emotional factors of hostility were related to rates of crashes and violations are reported. A group was formed containing 38% of the young men who showed strong hostility or strong alienation to the school system. For the majority of young men who were not in this group, it was found that the level of drinking made little difference to driving behavior. But for the minority with strong antagonism, it was observed that the higher the level of drinking, the higher the rate of crashes and violations. Of the 1700 men under 25 interviewed in this sample, 1200 were contacted a year later for a re-interview. Replication, stability and change in data were checked. It was found that strong antagonism was now accompanied by higher rates of crashes or violations among all drivers who drank. In order to find out whether the young men would drive more recklessly the second year if they had remained antagonistic ever since the first year, or if they had become newly antagonistic, the sample was divided into four categories. The largest differences in driving appeared between the group whose antagonism was not strong in the first and second year and the group whose antagonism was strong in both years. An increase in antagonism may also have had some effect on violations. A similar analysis was performed with data on drinking. With some exception (the case of men who drank nothing in the first year and began to drink in the second) there was only a slight connection between changes in drinking habits and the rate of crashes or violations in the second year. When stability or change in drinking was examined together with stability or change in antagonism, the results were that the lowest rates of both crashes and violations were found for men who remained low on hostility and alienation; the rates of crashes were three times higher for men who had continuing strong antagonism and started to drink in the second year; and the highest rates for violations appeared for men with stable patterns of continuing strong antagonism and drinking. For men with continuing strong antagonism, crashes were higher among those who drank limited amounts, suggesting that heavy drinkers had learned to adjust their highway danger. Violations were higher for heavy drinkers, suggesting that their defiance to laws was simply increased.

by Donald C. Pelz
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Grant NIH-MH 21160; NIH-MH 21276
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HS-017 006

A COMPARATIVE STUDY OF TRAFFIC VIOLATION FREQUENCIES IN A SELECTED GROUP OF PSYCHIATRIC OUTPATIENTS, AFTERCARE PATIENTS, AND EMPLOYEES OF A STATE HOSPITAL IN MICHIGAN

The driving records of 50 previously hospitalized psychiatric aftercare patients, 50 psychiatric outpatients who had never previously been hospitalized, and 50 employees of Northville

State Hospital were analyzed with respect to traffic violation frequencies. All subjects were residents of suburban Detroit, were white, and belonged to the middle class, and had no serious physical, antisocial, or sociopathic disorders. All possessed valid driver's licenses and all were driving. The patients varied in age from 21 to 60, the employees from 22 to 59. There were equal numbers of males and females in both groups. The men were shown to have significantly more violations than the women. Men patients had significantly more violations than men employees. Patients suffering from neurotic disorders averaged more violations than those suffering or recovering from psychotic illness. Those suffering from neurotic depression (49%) were responsible for the highest number of traffic violations (61.6%). Records of most of the patients were good, but the overall average differs significantly because of the violations committed by certain patients. It is suggested that taking away driver's licenses from mental patients is unjustified as a routine practice and that the decision as to whether a patient should or should not drive a car should be decided only after careful and detailed individual examination.

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HS-017 007

THE PERSONALITY AND MENTAL HEALTH OF SERIOUS TRAFFIC OFFENDERS

An attempt is made to identify high risk individuals in the driving population, and the implications of these findings for prevention are discussed. One hundred persons (87 males, 13 females, alcohol convicts excluded) who were found guilty of serious traffic offenses were compared with 99 controls (obtained from the Department of Transport's files) matched for age, sex, residential district and type of driver's license held. Each group was given psychological tests and questionnaires which took about 75 minutes to complete. The controls were shown to have a higher socio-economic status than the offenders, despite their similarity in educational status and suburb. More offenders than controls reported having been taught at professional driving schools rather than by relatives or friends. It was demonstrated that more offenders than controls had experienced recent adversity in their lives. The following mental health and personality variables were considered: general health; hostility; intelligence; neuroses; social conscience; rigidity; impulsiveness; abstract thinking; and adverse life events. More offenders had evidence of non-psychotic psychiatric disorder, were more impulsive and lower in social conscience. The aforementioned finding regarding the excess of adverse life events reported by the offenders may be practically useful since it could be used to warn individuals of high risk times in their lives.

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University of Tasmania, Australia
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HS-017 008

DRIVERS' ATTITUDES TO THE SERIOUSNESS OF ROAD TRAFFIC OFFENCES CONSIDERED IN RELATION TO THE DESIGN OF SANCTIONS

An attempt is made to obtain information on the seriousness with which different traffic offenses are perceived by the driver population, from a sample of ordinary British drivers, so that a sanctioning system might be most effective. A questionnaire, magnitude rating-scale method was used to obtain subjects' assessments of seriousness among a range of 31 traffic "offenses", some in force, some not. Subjects rated the offenses on a 10-point scale, and they were divided into four subgroups in terms of their instruction on how to interpret "seriousness." The subgroups were: the control group which was given no specific instructions concerning the standpoint they should take in rating seriousness; the personally involved group which was told to rate as if they were the person most likely to be inconvenienced or injured if the offense was committed by another person; the "personally responsible" group which was told to rate as if they were tempted to commit the offense themselves; and the "social consequences" group which was told to rate in relation, to the effect they thought the consequences of the offense would have for society in general. The subjects were 224 volunteers from the Applied Psychology Unit Research Panel who all held current driver's licenses. Each subgroup was half male, half female, and half from the 18-25 year old age group, half from the 35-55 age group. Personal data was obtained from the subjects before the questionnaire was completed. There proved to be a significant overall level of agreement among the subjects on the ranking of offenses for relative seriousness. Compared to the proposed European points sanctions, most of the offenses involving vehicle defects are under-sanctioned, driving while uninsured is under-sanctioned, driving without a license is very over-sanctioned, and offenses which involve physical or mental impairment are over-sanctioned, according to public opinion. Younger males rated most offenses more serious than younger females or older males. Older females rated offenses more serious than all other subgroups. Ratings from the standpoint of "social consequences" tended to be more serious, except among younger males, who also under-rated the seriousness of their responsibility for offensive driving compared with other subgroups.

by Ivan D. Brown; Alan K. Copeman
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HS-017 009

USAF MULTIMEDIA TRAFFIC TRAINING PROGRAM

A program developed by the United States Air Force (USAF) to reduce the number of annual deaths among its personnel in private motor vehicles is presented. The intent of the program was to be straightforward, to avoid emotionality and sentiment. A system was established for presentation, questions, answers, and recording utilizing movie projectors, slide projectors, electronic student responders, electronic recording devices, and electronic control of the projection equipment. A format of 18 one-hour presentations was developed. In time,

these first 18 units were distributed throughout the USAF. During the five years since the introduction of the program in which the USAF trained about 2.5 million people, private motor vehicle fatalities have shown a marked decline from an average of 418 per year before the program to 340, a 19% decrease. The cooperation that came into being between the USAF and the Department of Transportation (DOT) on this particular program is detailed. An agreement between the two made available to the USAF the extensive expertise and research facilities of the DOT in return for the rights of use of the USAF program. It is concluded that there is every indication that a rational approach to an emotional problem through the audiovisual medium expanded to multimedia presentations can have a very salutary effect through changing attitudes, which results in desired modification of behavior.

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HS-017 010

EVALUATION AND DEVELOPMENT OF DRIVER TRAINING

A project initiated to experimentally evaluate existing driver training programs and driver performance measurement/prediction instruments is described. A total of 3,276 United States Coast Guard recruits (2,155 experimentals and 1,121 controls) participated in the project. Physical, biographical, driving history, attitude and temperament data were collected on each recruit. Four criteria (age, number of accidents, holds driver's license, had driver education) were used to create matched groups. Recruits from each group were then randomly assigned to the experimental and control groups. All received pre- and post-testing. One of the project purposes was to determine if off road tests could be used as a substitute for accident data. Three experimental training programs were conducted comparing the effectiveness of two primary driver training techniques: multiple car driving training, and multimedia classroom. Program One consisted of 14 hours of multimedia classroom training and 14 hours of multiple car driving range training. A total of 619 experimental and 388 matched controls participated in Program One. Programs Two and Three were run concurrently. Program Two used only the multimedia classroom training and Program Three used only the range training. This enabled a comparison of range, multimedia classroom, and a combination of the two media with appropriate control groups. Program Two had 806 trainees, Program Three had 730 and the control group for the two programs had 733. The driving range was found to be the preferred training by the recruits. Classroom lesson scores were not found an adequate measure of content acquisition. At post-test, all experimental groups had significantly higher knowledge test scores than the control groups (Program One being the highest). A summary of the findings showed that those who received either combined classroom and range training or only range training reported that they performed more of the desired driving behaviors than did their respective control groups. The most striking effect of training was on injuries, with a 167% reduction rate in Program One. It is concluded that the project furnishes strong support for the con-

tention that driver training is an effective accident countermeasure.

by Richard F. Pain; John A. Whittenburg; Robin S. McBride;
Gail L. Baker
URS/Matrix Co.; SSTAR, Inc.
Rept. No. PS4b ; 1973 ; 15p 16refs
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HS-017 011

ROAD HUMPS [SPEED BUMPS] FOR THE CONTROL OF VEHICLE SPEEDS

The suitability and effectiveness of humps for alerting drivers and controlling vehicle speeds is investigated. Seven vehicles including private cars, trucks, a moped and a bus were used in the tests. Six subjects were asked to make assessments of rides over humps. Two of the subjects were laboratory drivers, aged 47 and 49, who drove all of the vehicles; two, aged 19 and 25, sat in the front passenger seats and recorded their own assessments and those of the drivers; and the remaining two subjects, aged 31 and 34, were concerned only with testing a moped over the humps. Except for the moped pillion driver all subjects were male. The subjects were to make note of the noticeability and discomfort of the different humps at various crossing speeds. Fifteen wooden humps were tested. They were in two main classes: short humps which could be straddled by the wheels of most vehicles; and long humps which could be straddled by the wheels of only some large vehicles. The humps ranged from 0.05m to 3.66 m in length and from 13mm to 152mm in height. All given humps were crossed at all given speeds up to the maximum speed consistent with safety. A continuous trace of the vertical component of acceleration against time for one bus and one car was recorded on photographic film as the vehicles crossed each of the humps at various speeds. High speed film at 150 frames per second was taken of one of the cars as it crossed various humps. The maximum displacement of the center of the wheel and tire tread was noted as was the maximum angular and vertical displacement of the car body. If the wheels of the car left the ground, the time for which contact was lost was measured. It was found that a hump 152 mm long with a height between 19 and 38 mm was capable of alerting drivers by producing a noticeable vibration. Increasing the height of short humps introduced safety problems such as the risk of loss of control or of vehicle damage by grounding and increased severity of impact on the tires and vehicle suspension. Increasing the length of the hump tended to reduce the hazard and a hump 3.66m long and 0.10m high showed promise for controlling vehicle speeds. Nevertheless, the use of humps, especially at sites where vehicle approach speeds are high, should be undertaken with caution.

by G. R. Watts
Dept. of the Environment, Transport and Rd. Res. Lab.,
Crowthorne, Berks., England
Rept. No. PS-1-4 ; 1975 ; 41p 2refs
Presented at the 1st International Driver Behavior Res.
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Availability: Reference copy only

HS-017 012

THE PERCEPTUAL PROBLEMS OF THE DRIVER [SPEED JUDGMENT]

Various approaches to the problems of speed misjudgements are investigated. Experiments examining very rapid speed changes were made using a driving simulator. The size of the driver's misjudgement was found to be a function of the magnitude of the pre-change speed and the size of the change required. A driver slowing to his impression of 40 km/hr to negotiate a bend could actually be moving at 46 km/hr if beforehand he had been travelling at 60 km/hr, 52 km/hr from a previous 80 km/hr or 63 km/hr from a previous 120 km/hr. Drivers were found to make an over-estimation when called upon to increase speeds; they were satisfied by a speed less than the one they were trying to achieve. Effects of misjudgements were found to die away approximately 100 seconds after the change. Methods of counteracting speed misjudgements that are discussed include: a head-up display speedometer which would use lenses or mirrors and an optical combiner so that the speedometer reading appears on the windshield, high in the driver's view and mixed with it; advisory speed signs at all dangerous bends and hazards (which in combination with head-up display speedometers have proven very effective); and speed control markings—lines on the road surface painted closer and closer together which, in effect, cause speed to be reduced by giving the illusion of increased speed. Some effects of speed misjudgement on risk acceptance were also investigated. In a gap acceptance experiment, drivers approached a gap at 48 km/hr and were allowed to slow down to negotiate it when they were within 60m. Gap-negotiation speeds appeared to be rather high and there were strong indications that speed distortions can lead to greater risk acceptances than a driver realizes. Following distance was also shown to be affected by speed misjudgement. Immediately after slowing down, following distances were less than those subsequently recorded when adaptation to the changed speed was complete.

by Alexander Irving
Transport and Rd. Res. Lab., Crowthorne, England
Rept. No. PS-1-b; 1973; 16p 5refs
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 013

THE USE OF BEHAVIOURAL METHODS TO ASSESS TRAFFIC HAZARD

Methods of measuring driver task difficulty so that potentially hazardous features may be identified and countermeasures assessed are described. A project designed to test task difficulty by the imposition of a secondary task of constant difficulty so that both the driving and the secondary task are hampered is explained. A serial response task, requiring a foot movement to one of two switches next to the brake pedal in response to a headphone signal to left or right ear, was selected as the secondary task. Physiological responses to increased task demands were also measured. Heart rate was found to be good measure with some subjects, whereas respiration rate was found to be a good measure with others. On a test track, secondary task response times and omissions were found to decrease as lane width increased, and, in traffic, 84% of traffic "events" were associated with secondary task omissions and/or long response times. Physiological response level

declined from the beginning to the end of the test period. It showed little if any relationship to lane width, and no attempt was made to relate physiological responses to individual traffic events. It is concluded that secondary task performance provides a valid and sensitive measure of driving difficulty. A "before and after" evaluation of clearway parking restrictions was conducted in Adelaide, South Australia. Five sections of road were incorporated into a 20 mile test route for study. Five male subjects took part, ranging in age from 25 to 41 years and in driving experience from 7 to 23 years. All were familiar with the roads travelled during the experiment. In the "before" stage each subject made two trips, one during the morning peak and one during the evening peak in the direction of main traffic flow. The secondary task was performed for a short period in the parked vehicle before and after each trip, and while driving along each test section. When the clearways were officially declared, the "after" stage of the experiment was performed using the same procedure. It is concluded that a clearway might reduce driving task difficulty in two main ways: by providing extra road space; and by eliminating parked vehicles which are potential sources of conflict.

by Wendy A. MacDonald; Colin Cameron
Australian Road Res. Board, Australia
Rept. No. PSIA; 1973; 19p 21refs
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 014

A QUASI-CLINICAL STRATEGY FOR SAFETY RESEARCH [PUBLIC OPINION AND CAR SAFETY]

Effective public opinion and attitude change techniques can only be arrived at by following a two-stage, multi-step analysis of attitudes underlying the specific behavior it is desired to affect. At the same time, cutting across the individual stages and steps of this approach, is an attempt to combine a variety of basic psychological methods which have traditionally been thought to be compatible. Five areas of investigation were delineated: attitudes towards car safety in general; attitudes towards seat belts specifically; the personal background of the respondent; the respondent's experience with automobiles; and the respondent's personality. A random sample of 465 residents of Regina were interviewed. It was found that while people acknowledge the efficiency of seat belts in preventing road accidents, their behavior exemplifies a total disregard of that acknowledgement. Although some constructs derived from social psychology, such as consistency theory, may be used to explain certain limited aspects of behavior with regard to neglect of seat belts, such constructs apply only to a small minority of non-users. While certain demographic characteristics, notably age and rural or urban residence, are related to seat belt usage, by and large none of the basic traditional personality variables are good predictors of behavior in this area. At the same time, the public has a relatively well-defined image of the habitual seat belt wearer, and wearers themselves have a distinctive self-image. Running through all of the findings is the sense of a remarkable simplicity, or naivete, underlying the reasons for not wearing seat belts. Thus there are indications that the best way to increase seat belt usage to a

significant level would be to take the decision about whether or not to use seat belts out of the hands of the individual user.

by Chris Knapper; A. J. Cropley
University of Saskatchewan, Regina, Canada
Rept. No. SM-2 ; 1973 ; 8p
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 015

THE SOCIOLOGICAL AND CULTURAL STRUCTURE OF SOUTH AFRICAN POPULATION GROUPS AS A COMPLICATING FACTOR IN ROAD SAFETY

Certain intrinsic factors, more particularly on a social and cultural level, are shown to contribute towards South Africa's problems in effectively combating road traffic accidents. The problem in South Africa has to be approached from various fronts in order to provide for the differences in social values and customs of its peoples. This situation tends to complicate the overall road safety problem to a greater extent than in most other countries. Statistics on South Africa's diverse population are given. The traffic accident situation is broken down into various topics: the magnitude of the problem; fatalities by population group and status (drivers, passengers, pedestrians, and bicyclists). Cultural backgrounds of the four main population groups (whites, Bantus, coloreds and Asians) are discussed. The greatest problem relating to traffic safety appears to be an educational one. The Bantus, the largest population group, present, perhaps, the most complicated traffic safety educational difficulty in that the tribal culture transmits totally different conceptions of many aspects of life including individual responsibility that conflict with Western modes of societal conduct. Young people who come from an area of high population and low motor vehicle density are quite liable to become involved in traffic accidents in an urban, high motor vehicle density area. Of the 7,948 people killed in traffic accidents in 1970 in South Africa 3,513 of them were pedestrians of which 2,468 or 70.3% were Bantu. Nearly two-thirds of all motor vehicle drivers killed on South African roads are whites, as is to be expected on account of their over-representation in vehicle ownership (80% of all registered vehicles). It is noted that South African drivers are generally observed by foreigners to be very aggressive; this being perhaps explained by the fact that the drivers are not used to the high traffic density that is becoming more prevalent in South Africa and, therefore, make up for the increased delays with faster, more aggressive driving.

by J. R. Odendaal
National Inst. for Rd. Res., Council for Scientific and Industrial Res.
Rept. No. SM-2 ; 1973 ; 16p 18refs
Presented at the 1st International Driver Behavior Res.
Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 016

PSYCHOLOGICAL ASPECTS AND MOTOR VEHICLE ACCIDENTS

Research, based on the presupposition that a person, while driving, is giving expression to his way of life and to his values, is reported. It was assumed that some personality dif-

ferences could be found among the following three groups of drivers: drivers who had not been involved in accidents or driving offenses at all; drivers who had been involved in driving offenses only; and drivers who had been involved in both accidents and driving offenses. No definite hypotheses were formed as to the direction of the differences among the groups. However, it was expected that differences among the three groups of drivers would be expressed in the following areas of functioning: the area of a person's approaches to values; reactions reflecting ascendance-submission behavior; the extent of aggression and the direction of its expression in situations of frustration; and the attitude to traffic laws. A sample of 86 male drivers, aged 18-21, from a population of drivers doing obligatory service in the Israel Defence Forces, served as subjects. The majority had learned to drive in the Army; all had served in the same base and were under similar conditions of discipline. All were similar from the point of view of intelligence, education and state of health. All were truck drivers. The subjects were divided into three groups according to the aforementioned characteristics and these three groups were each subdivided into "new drivers" (those who had driven up to 9 months) and "experienced drivers" (those who driven for more than nine months). For testing the subjects the following devices were used: the Study of Values by Allport, Vernon and Lindzey (the "Values Study"); the A-S (Ascendance-Submission) Reaction Study by Allport and Allport (the "A-S Study"); the Picture Frustration Test by Rosenzweig (the "Frustration Test"); and a questionnaire pertaining to the driver's attitudes toward traffic laws and his self-assessment as a driver. In two of the devices, the Values Study and the Frustration Test, differences were found which indicate a relationship between the occurring of the accident and the personality. In the Values Study, the Political was the one which distinguished between the three groups. In the Frustration Test, experienced drivers with no accidents or offenses scored higher in Group Conformity. New drivers with accidents and offenses obtained the highest score on Aggression-Revelation. A distinct psychological pattern is suggested, the essential component being aggression. A study of personality is suggested as an approach for eliciting accident-proneness in drivers.

by Eugenia S. Shere
Bar-Ilan Univ., Ramat-Gan, Israel
Rept. No. SM-2 ; 1973 ; 11p 18refs
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Availability: Reference copy only

HS-017 017

COURSE FOLLOWING [TRACKING] OF MAN-AUTOMOBILE SYSTEM

The reason why a driver can steer an automobile stably at a high rate of speed has never been theoretically explained. An attempt is made to clarify not the dynamic characteristics of the man-automobile system as a whole but the content of that dynamic structure. The parameters of a human being's information processing and control function in the act of driving are investigated. Beginning with the dynamics of the plane-motion system and combining the dynamics of the steering system, a mathematical model is constructed of the man-automobile system with reference to experiments on automatic driving by a simulated driver. Research into adopting a method of automatic control is presented utilizing a block diagram, transfer function, frequency response diagram and root loci

drawn with velocity as a parameter. The dynamic aspects of the input system of the man-automobile system are emphasized.

by Eiichi Kikuchi

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Availability: Reference copy only

HS-017 018

AN EVALUATION OF DRIVER EDUCATION AS A ROAD SAFETY MEASURE

Driver education courses were introduced into the curricula of nine selected British schools. All students were at or close to the age at which a provisional driver's license can be obtained, 17. The course included classroom instruction, supervised practice and instruction inside a real car in a real traffic environment, and instruction on a driving simulator and/or on a multi-vehicle off-street driving range. The duration of the course was three years. In the last two years the introductory work was reduced while the practical behind the wheel experience was increased from 4 to 15 hours. These last two years (Sept 1969-Aug 1971) in which 1200 students were involved were considered the main study. Classroom tests were given at intervals throughout the course to both the students of the control group schools and students of the experimental group schools. Experimental groups were continuously assessed by instructors during practical training. They were examined half way through and at end of the course by driving examiners. Biographical data was collected to test the homogeneity of the groups on such factors as socio-economic status, car availability and so on. The Shipley Abstraction Test, the Bennett Differential Aptitude Tests of mechanical ability and space relations, and the California Psychological Inventory were administered. Standardized scales were selected primarily to permit adequate matching of samples and controls. Follow-up studies were conducted for each student over the three year period. Shortterm, intermediate, and long term effects included: trained students knew much more about driving than the untrained group, boys more than girls; boys' on the road and driving range performance during course was better than girls'; the more knowledgeable the student, the more likely he or she was to be a better driver; course was helpful in achieving national driving test standard with fewer hours behind the wheel; the course led to an increase in the number of people who took out a provisional license, a reduction in the average age at which they learned to drive and an increase in the number who passed the test; driver-trained students were found to have less exposure to risk than non-trained students; a greater proportion of the trained students wore seat belts; even two years after the course had finished the driver-trained students knew more about driving matters than the control group students; subsequent behavior on the road seems to be affected by formal knowledge and this can be imparted more successfully in the classroom than in the car; the students from the driver-trained groups had fewer accidents per driver than those from the control groups; the boys groups (experimental and control) are very similar when only the injury accidents per mile are considered, but the trained girls had significantly fewer accidents per mile than the girls in the control groups; and the girls in general had fewer accidents per mile than the boys. The main conclusion to date from the

study of longer term effects is that driver education in schools has little effect on the number of accidents.

by S. Raymond; A. W. Risk; Jean E. Shaoul

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Availability: Reference copy only

HS-017 019

ACCIDENT PREVENTION FROM STUDIES OF DRIVER BEHAVIOR

Research work on driver behavior carried out at the Transport and Road Research Laboratory is described; and links between such studies and accident prevention are demonstrated. Accident analysis, as to type and location of accident, can be made using accident reports. In order to study driver behavior, with a view to establishing remedial measures designed to make the driving task less difficult, it is necessary to examine very large numbers of drivers together with their accident records. Some intermediate criteria must be developed for the assessment of the drivers' behavior either during normal driving or when completing some specific driving task. At particular locations, some criteria of safety, other than number of accidents, are required, in order that the time scale of measurement may be shortened. Any such intermediate criteria must be validated and shown to be directly related to accidents and this has been achieved for the technique of conflict study and analysis of driver behavior at rural intersections. Two methods, using observers or using a movie camera, are used to note the maneuvers of vehicles and when a conflict occurs note such items as where it occurred on the junction, the type and number of vehicles involved, and avoidance behavior taken. The conflict technique not only enables the situation leading up to the danger point to be studied in detail by research workers and highway engineers attempting to find ways of improving driver behavior but, at particular locations, to use the frequency of occurrence of serious conflicts as a criterion of safety in place of the less frequently occurring accidents. The method of in-car observation of driver behavior as the selected subject drives around a test route in normal traffic is described. Significant differences in behavior between two groups randomly selected from current driver license holders and drivers convicted for driving without due care and attention are apparent. It is concluded that results of driver behavior studies can help improve the use of resources available for road safety measures, that the most obvious application lies in driver training where the professional driving instructor has a role to play in road safety, and that behavioral changes are essentially long term and difficult to induce but the potential benefits to road safety are immense.

by K. Russam

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HS-017 020

A CONTROLLED STUDY OF THE EFFECT OF TELEVISION MESSAGES ON SAFETY BELT USE

A survey was conducted of actual safety belt users and non-users to determine the factors that distinguished the two groups. Television messages based partially on the preliminary study were developed and produced. By industry standards, the messages were of high quality. These messages were then shown on one cable of a dual cable television system. They reached 6,400 households out of the 13,800 on the system. The second cable as well as noncable, in-county (population 230,000) groups allow comparison with groups not exposed to the messages to determine the effect of messages relative to the effect of other factors that might influence belt use. The messages were shown for nine consecutive months. For one month prior and throughout the campaign drivers were observed from 14 selected observation sites and information as to safety belt use was recorded on tape recorders. The drivers were matched through license plate numbers to the households on a given cable. In addition to being controlled, the study was "double blind" that is, the television viewers did not know that they were being studied and the observers did not know the purpose of the study or that the persons being observed were in experimental or control groups. The campaign had no effect at all on safety belt use. It is concluded that the failure of these campaigns to increase safety use adds evidence to the argument that behavior modification approaches are inefficient and often ineffective means of reducing highway losses. The apparent failure of a number of mass media safety campaigns to increase use beyond pre-campaign levels may not mean that it is impossible to create a campaign which will increase safety belt use. However, the evidence of lack of effect of past efforts is sufficiently strong that the burden of proof of substantial further gains in belt usage resulting from such campaigns is on those who advocate use of mass media to promote use of safety belts.

by Leon S. Robertson; Albert B. Kelley; Brian O'Neill; Charles W. Wixom; Richard S. Eiswirth; William Haddon, Jr. Insurance Inst. for Hwy. Safety
Rept. No. SM-6-c; 1973; 18p 24refs
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HS-017 021

SIMULATOR APPLICATIONS TO DETERMINE EFFECTS OF DISTURBANCES ON AUTOMOBILE DRIVING CHARACTERISTICS

A control-theory approach to an empirical analysis of the driving characteristics of the man-automobile system is discussed, the main specifications of a dynamic simulator that has been developed are outlined, research objectives for the future are set forth, and the findings of a basic experiment involving a static simulator are given. In a disturbance or emergency situation, the gain and phase lag in changing direction in relation to the amount of handling, the amount of inertia of the steering unit, the return of the steering wheel, and steering torque are all closely related to control performance. Relative straightness of the course being followed is also important. Reported is one experiment conducted in an assumed situation where a step-type lateral force is exerted on a vehicle near its aerodynamic center to displace it laterally, in an attempt to determine the extent to which training can improve a driver's ability to steer

his vehicle back to its original course. Results indicate that significant improvement can be expected. Results from a static-simulator experiment conducted to determine the influence of intoxication induces disturbance on braking and handling are reported. Accelerating, steering and braking were performed by 50 subjects according to instructions or signals. The alcohol input used was 150-300 cc of whisky and this was consumed to the point where the concentration of alcohol in the breath was 0.25 mg/l. Test time was thirty minutes. Compared with those observed when they had not been drinking the subjects showed the following tendencies: with 32% the tendency to overshoot in controlling the vehicle increased and changes were observed in response time and time constant; with 18% of the subjects eye movement decreased and blocking began to appear; and no significant change was observed in time spent in shifting from the one pedal to the other or in reaction time.

by Yasuhei Oguchi
Shibaura Inst. of Tech., Dept. of Engineering
Rept. No. SM-1; 1973; 10p 7refs
Presented at the 1st International Driver Behavior Res. Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 022

DRIVER/VEHICLE RESPONSE AND PERFORMANCE IN THE PRESENCE OF AERODYNAMIC DISTURBANCES FROM LARGE COMMERCIAL VEHICLES

Analytical and experimental results are shown for the disturbance situation caused by an operation in close proximity to a large commercial vehicle such as a bus or truck. The current driver control model, based on an empirically founded theory of manual control, reflects a large body of human operator response data obtained in a variety of vehicular control tasks, including driving. The disturbed vehicle dynamics are a major task variable. Also considered are: driver describing function; remnant; driver vehicle system structure; driver/vehicle response; heading control; and lateral deviation control. The aerodynamic disturbances were quantified for various commercial vehicle shapes using wind tunnel experiments with 1/10 scale models. The forces and moments on the disturbed vehicle (car) were measured for various relative crosswind angles, center-line separations, and longitudinal positions. There are several ways to improve driver/vehicle performance in disturbance situations. Changes in the vehicle shapes which reduce the magnitude of the aerodynamical disturbance are one obvious way. Increasing the separation distance between vehicles is beneficial. Increasing the passing car speed helps by reducing exposure time and increasing the frequency content of the disturbance. If the truck or bus passes the car, reduction in the speed of either vehicle is generally helpful. Better car handling dynamics and driver skill improve performance. Reducing the vehicle airspeeds and wake effects are helpful. Results also suggest guidelines for operation by the truck or bus driver.

by David H. Weir; Roger H. Hoh; Gary L. Teper
Systems Technology, Inc., Hawthorne, Calif.
Rept. No. SM-1; 1973; 10p 8refs
Presented at the 1st International Driver Behavior Res. Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 023

SOCIAL MARKETING AND DRIVER BEHAVIOUR [BEHAVIOR]

Effective application of the techniques and strategies of social marketing to aspects of driver behavior is discussed. It is pointed out that marketing's aim of persuasion is more readily accepted by those concerned with driver behavior than by those concerned with other social issues. It is suggested that whereas marketing in business is concerned with every aspect of bringing goods from production stage to the consumption stage, a social marketing campaign for road safety would be concerned with every aspect of bringing about more responsible driving behavior. Until co-ordinated social marketing techniques are used to improve the behavior of drivers, in the interests of all road users and society at large, current public service advertising strategies are unlikely to make more than a token contribution. Those who would concern themselves with social marketing would have to know a lot more about the background to safe use of the roads and the roles of all manner of specialists than is deemed necessary for the planning of the current campaigns. It is concluded that in driver behavior, in road safety, and in connection with many important social issues, the business sector's success in bringing about acquisitions in competitive markets requires examination and not just the criticism which it so readily receives.

by N. Marcus
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Rept. No. SM-6-h; 1973; 9p 7refs
Presented at the 1st International Driver Behavior Res.
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Availability: Reference copy only

HS-017 024

DRIVER BEHAVIOUR AT PRIORITY TYPE INTERSECTIONS

Two studies are described which examined the drivers' gap acceptance behavior at traffic intersections: one using a simulated experiment; the other obtaining repeated measurements by identifying a group of drivers which used a priority intersection on successive evenings. In the simulated experiment a subject was placed in a parked car in a similar position to that of a minor road approach to a priority type intersection. He was instructed to use his brake pedal to signal when the gap in the oncoming traffic was considered by him to be too small for safe crossing. The brake pedal was released when the subject felt that it was safe to enter the stream of the traffic. Six undergraduate engineering students and seven members of the Institute of Advanced Motorists were used as subjects. Data was recorded using time-lapse cameras at a speed of two frames per second so that any car travelling below 65 mph would be photographed at least twice and its speed could be determined. Each subject was run for the duration of 100 feet of film which results in between 80 and 120 measurements of critical gap. In the real life observations, a private car park was filmed on 79 evenings around 5 p.m., when drivers were leaving work. Traffic flow was around 1,200 vehicles per hour. The same type of time-lapse photography was used. Individual drivers were identified by the use of tape recorder into which a brief description of vehicle and driver were dictated. Data recorded refers to the 16 right-turners who appeared most frequently. In the simulated experiment it was found that: high mean critical gap was associated with a high variance in criti-

cal gap determination; the students did not differ from the drivers from the Institute on either measure; and age is related to variance. Results were similar from the real life studies. After giving a personality test to the six students, correlations were found between extroversion and mean critical gap and between extroversion and variance of critical gaps. For the experimental subjects, correlations were computed between the speed of the approaching vehicle and the length of the critical gap in distance and between critical gap and vehicle speed. Faster vehicles resulted in smaller critical gaps measured in time but longer critical gaps measured in distance.

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Engineering, Sheffield, England
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HS-017 025

DRIVER VISUAL BEHAVIOR AND ELECTRODERMAL RESPONSE DURING HIGHWAY DRIVING

Tests of driver visual behavior and electrodermal response were performed on a rural highway route, (about 12 kms) in Sweden. An eye-marker camera utilizing two TV cameras, mounted on the subject's head, one recording terrain and the other recording cornea reflex, was used to record eye-marks. An electrodermal response device (EDR) consisting of electrodes, amplifiers and recorder was used to register skin conductance, reflecting continuous changes in driver activity level and thus indicating fluctuations in the driver's multisensory channel capacity. Ten subjects were used. Along the test road 300 road sections are carefully measured with respect to the geographical position. To synchronize the video film with the writing strip of the EDR, the passing of these sections were marked on the writing strip. Eleven test points were evaluated: three way crossing; road sign; left hand curve with traffic island; right hand curve in avenue; right hand curve with service road to the left; right hand curve with uphill grade; left hand turn in a three road intersection; fourway intersection; right hand curve with guard rails and uphill grade; motorway with bridge; meeting other cars; overtaking; pedestrian encounter; and over-taking a cyclist. Findings included: in sections with restricted sight distances drivers looked so as to maximize the sight distance; in left hand curves drivers looked along the right side of the road; and in right hand curves drivers looked along the left hand side of the road. It is suggested that the road signs should be placed in the direction the driver looks when he tries to maximize his sight distance, and for roads of low geometrical standards the signs should be placed on both sides of the road, not merely on the right which is usual today. Photographs of the test points are included.

by Martin Helander; Sven Soderberg
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Rept. No. SM-7; 1973; 10p 16refs
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HS-017 026

COMPUTER SIMULATION TO PREDICT NIGHT DRIVING VISIBILITY AS A FUNCTION OF HEADLAMP BEAMS

The details of a digital computer simulation model are described and its results are shown in comparison with the results of field tests on night driving as a function of headlamp beams. A major consideration in the development of this model was to provide an estimate of the visibility distance both before and after the meeting with an opposing vehicle. The model also takes into account the reflectance of the pavement which affects the level of foreground luminance ahead of the vehicle. The longitudinal separation distance between the vehicles is defined as the independent variable, which is plotted against the dependent variable, the predicted visibility distance. The model assumes the driver to have 3 stages of visual adaptation: adaptation to increasing veiling glare; readaptation to slowly decreasing veiling glare; and recovery during rapidly decreasing veiling glare. In the field tests conventional U.S. low and high beams were used on two test cars which were driven towards each other on a long, flat straight section of road. The subject's task was to make observations to determine the position of the square with respect to the line on small square targets placed in the road. The method allowed the visibility distance for each subject, to each target, to be found as well as the separation distance between the vehicles at the time. Tests were conducted with the target at the right and the left of the lane, as well as in the center; and for lateral separations such as are found on two-lane roads and divided highways. The reflectance of the detail of the targets was also systematically varied. The experimental tests used 12-18 drivers of various ages in each condition. It was noted that the fit between the results obtained by the use of the model and those obtained in the field test is quite reasonable and it has concluded that the process of visual adaptation to glare was modeled quite effectively.

by Rudolf G. Mortimer; Judith M. Becker
University of Michigan, Hwy. Safety Res. Inst., Ann Arbor, Michigan
Rept. No. SM-7-e ; 1973 ; 12p 14refs
Presented at the 1st International Driver Behavior Res. Conference, Zurich, Oct 1973.
Availability: Reference copy only

HS-017 027

THE SAE CUMULATIVE FATIGUE DAMAGE TEST PROGRAM

A test program designed to provide a set of basic data for determining the validity of various fatigue life prediction methods is described. Three variable amplitude load histories were obtained from service strain-time histories: a load history with a primarily compressive mean load obtained from the bending moment on a vehicle suspension component driven over an accelerated durability course; a vibration with a nearly constant mean load, obtained on a mounting bracket being excited by vehicle action over a rough road; and a load history with a drastic change of mean load obtained from transmission torque, measured on a tractor engaged in front-end loader work. The histories were each converted to a digital series of peaks and valleys. One pass through the digital sequence was considered one block. A test program was conducted using a notched member containing many of the complexities of actual components and incorporating two steels (RQC-100 and Man-

Ten) commonly used in the ground vehicle industry. Basic properties data were generated for both materials. The "component like" specimen was a compromise design which had the advantages of: being relatively stiff; a stress concentration factor and stress state typical of component design practice; having a minimum of critical dimensions and all surfaces either as supplied or as machined, permitting studies of both crack initiation and crack propagation. Constant amplitude tests were performed on the specimen to provide basic load-life data including processing and manufacturing effects. The variable amplitude test program consisted of 57 individual tests using the three histories at several load levels. Test load levels were scaled to provide fatigue lives ranging from less than 2 blocks to more than 100,000 blocks. The fatigue life in blocks to crack initiation, blocks of crack propagation, and total life are recorded. Plots of maximum load range vs. blocks to crack initiation for all tests are presented. Crack length vs. block data was also taken for each specimen. The cracked area was calculated. A set of fatigue data of sufficient generality has been produced so that methods of fatigue life prediction and laboratory simulation can be reasonably evaluated. Also, it was discovered that the stronger steel had longer crack initiation and crack propagation life at all load levels for all histories and that the inverse slope of the variable amplitude life lines varied from -3.8 to -7.25.

by Lee Tucker; Stephen Bussa
Deere and Co.; Ford Motor Co.
Rept. No. SAE-750038 ; 1975 ; 53p 3refs
Presented at the Automotive Engineering Congress and Exposition, Detroit, Mich., 24-28 Feb. 1975.
Availability: SAE

HS-017 028

FATIGUE LIFE PREDICTIONS FOR A NOTCHED MEMBER UNDER COMPLEX LOAD HISTORIES

Three computer programs are presented for predicting the fatigue life of notched members undergoing complex load histories. The programs, while differing in terms of required information, employ a common approach involving the determination of the material response at the notch root, an assessment of damage based on closed hysteresis loops, and a linear damage summation to predict life. The three computer-based analysis procedures were: the cyclic stress-strain analysis, based on the premise that the cyclic stress-strain curve of a material provides the necessary relation for the cyclic plasticity analysis; the notch analysis, based on the premise that in dealing with complex geometries, it is necessary to relate nominal loads or stresses to the local stress-strain response at the critical locations in a structure; and the damage analysis, based on the premise that the assessment of damage for the various events in a complex sequence can be conveniently combined with the stress-strain analysis. Experimental data generated by the Fatigue Design and Evaluation Committee of the SAE are compared to the results obtained from the analysis methods. In the experiments, specimens made from both Man-Ten and RQC-100 steel were subjected to load histories scaled to various load levels. Fatigue life predictions made with each of the three analysis methods are summarized. Comparison with the experimental data reveals that the load-strain analysis gives the best agreement, followed by the strain-based analysis and finally, the notch or Neuber analysis. While the Neuber analysis is found to give the least accurate predictions, it is noted that nearly all the predictions are on the conservative side. This is primarily due to the overestimation of

stresses and strains using the straight line approximation of the Neuber hyperbolas. The load-strain analysis, while more accurate, does require additional input information, namely a component calibration curve relating applied load to local strain. The simple strain-based analysis results in quite reasonable life predictions. It ignores all mean stress effects and thus would seem most applicable to higher ductility materials where such effects are minimized by cyclic plasticity. The choice of method would be dictated by the input information available.

by R. W. Landgraf; F. D. Richards; N. R. LaPointe
Ford Motor Co.
Rept. No. SAE-750040; 1975; 12p 10refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 029

A FINITE ELEMENT AND CUMULATIVE DAMAGE ANALYSIS OF A KEYHOLE TEST SPECIMEN

The Cumulative Damage Division of the SAE Fatigue Design and Evaluation Committee recently finished an extensive fatigue test program. This test program involved one Keyhole test specimen, two different materials (Man-Ten steel and RQC-100), three loading spectrums (bracket, suspension, and transmission or axle), and the cooperation of eight test laboratories to run the 58 specific fatigue tests. The objective of the overall division program was to determine the state-of-the-art of cumulative damage life prediction capability using the experimental data for correlation. This work reports a finite element and damage analysis of the Keyhole test specimen. The calculated notch root strain was compared with the experimental strain. The calculated stress and strain were used in a cumulative damage procedure to predict life for both materials subjected to various load levels for each of three loading spectrums. Utilizing the NASTRAN elastic-plastic finite element analysis, the following results were obtained: the NASTRAN computed notch root strains on the Keyhole using the cyclic stress-strain material data correlated very well with measured cyclic strains; a single strain gauge at the notch can not measure the equivalent strain, required to predict fatigue life from uniaxial fatigue data; most of the fatigue tests were within the two times life scatter band, either side of perfect correlation with predicted life; a finite element analysis can be useful in predicting fatigue life before components have been fabricated thus saving preliminary prototype testings to determine load-strain data.

by G. E. Barron
A. O. Smith Co.
Rept. No. SAE-750041; 1975; 9p 13refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 030

SPECTRUM FATIGUE LIFE PREDICTIONS FOR TYPICAL AUTOMOTIVE LOAD HISTORIES AND MATERIALS USING THE SEQUENCE ACCOUNTABLE FATIGUE ANALYSIS

Two steel materials (RQC-100 and Man-Ten) were tested under three different loading histories typical of those seen at different locations in an automotive structure. Variations in

the materials, spectra, and loading severity caused the resulting fatigue crack initiation lives to range from the very low-cycle to the very high-cycle fatigue regime. Fatigue failure is defined as the point at which the accumulated damage is equal to unity. The procedure used in applying the sequence accountable fatigue analysis (SAFA) to make crack initiation life predictions for the applied spectrum loading conditions is documented. This analysis is a general purpose computerized fatigue life prediction algorithm. The main elements of the program are: the initialization of the material property data, stress concentration information, and the load spectrum; the calculation of the local stress-strain as each peak of the load history is applied to the structures and divides it into an elastic stress spectrum and a plastic strain spectrum; the application of the range pair cycle counting routine to the elastic stress spectrum; the determination of the fatigue damage for the cycle-counted elastic stress spectrum and the plastic strain spectrum. It is concluded that the conditions chosen for evaluation in the SAE Cumulative Fatigue Damage Test Program form a good test of analytical crack initiation life prediction methods and that the SAFA was shown to be capable of predictions generally within a factor of plus or minus 2 for the wide variety of materials, load spectrum type and load severity levels seen in these tests.

by J. M. Potter
Air Force Flight Dynamics Lab.
Rept. No. SAE-750042; 1975; 12p 17refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 031

ACCURACY OF SIMPLIFIED FATIGUE PREDICTION MODELS

Three simplified procedures for predicting fatigue life (load-life analysis, "nominal" stress-life method, and abbreviated "nominal" strain-life analysis) are compared with actual test results to evaluate the relative accuracy and applicability of these frequently used methods. The part geometry, load histories, material properties, and test results used in these analyses were obtained from previous SAE testing. The load-life prediction method is based on the Palmgren and Miner linear damage rule. The inputs to the analysis are a load-time history for the "part" and a constant amplitude load cycles to failure plot. In all cases this method gave predictions which were longer than the test results. Most were between 2 and 10 times longer than the measured life. This unconservative result should be carefully considered when using this method in design analysis. The "nominal" stress-life prediction method is also based on the linear damage rule. The inputs to the analysis are "nominal" strain-time history as might be measured near a notch with a strain gage and constant amplitude cyclic stress-strain and stress-life fatigue properties. The method gave predictions which were within a factor of 2 of the test data in 13 of the 18 estimates. Four of the predictions were 2 to 10 times longer than the test results. In one case, the measured life was three times longer than the estimate. This method would be useful in predicting fatigue life; however, in general a computer would be required because of the time consuming effort to follow stress-strain response and rainfall count. The abbreviated "nominal" strain-life prediction method is also based on the linear damage rule. The inputs to the analysis are load-time history, smooth specimen stress-strain and fatigue properties and the theoretical stress concentration fac-

tor of the part. This method was also evaluated by calculating fatigue life for three different load histories and comparing with test results. Again, 18 predictions ranging from short to long life were made. Most of the predictions are within a factor of 10 of the test results. This method might prove useful as a field prediction tool since all the operations can be made manually with a hand-held calculator.

by Lee Tucker; Stephen Downing; Louis Camillo
Deere and Co., Materials Res., Moline, Ill.
Rept. No. SAE-750043; 1975; 9p 6refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 032

SULFIDATION CORROSION OF NICKEL-BASE EXHAUST VALVES

Severe corrosion was observed in the neck area of Inconel 751 material exhaust valves operated in an ebullient-cooled natural gas engine. A failure analysis was conducted consisting of the following areas of investigations: macroscopic and microscopic examination of the corrosive attack; electron-probe analysis of the corrosion layer on the exhaust valves; analysis of the deposits on the valve in the corroded area; analysis of the ash and sulfur content of the type of oil used in the engine at various operating times; the effect of mixture simulating valve deposits on Inconel 751 material at various temperatures and an electron-probe analysis of the corrosion by the simulated deposits. It was found and concluded that: the exhaust valve corrosion failures were the result of sulfidation initiated by the presence of calcium sulfate (CaSO₄) and carbon (C) deposits on the valve at operating temperatures of 1500 degrees F and above; the CaSO₄ deposits were residuals from additives in the lubricating oil used in the engine and the C was formed in the combustion process; the amounts of CaSO₄ ash and sulfur both increased as the engine operating time increased; localized reducing conditions, in this case created by the presence of C, must be present for sulfidation by CaSO₄ to take place; and aluminizing the Inconel 751 material significantly improved the resistance to sulfidation. It is recommended that this method of corrosion protection be used with discretion since aluminized coatings have been reported to reduce the fatigue properties of alloys.

by Gary C. Clark
TRW Inc.
Rept. No. SAE-750044; 1975; 8p 5refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 033

A COMPARISON OF TWO CYCLE COUNTING ALGORITHMS

Two cycle counting algorithms, based on rainflow and range pair methodologies, are compared and evaluated with respect to the exceedance spectra, which result from cycle counting three typical automotive load spectra. Also, the effect of the cycle counting algorithm on fatigue life predictions is demonstrated using the sequence accountable fatigue analysis. Each load spectrum used in this study consisted of a series of consecutive maximum and minimum load peaks. These spectra

were considered typical of load histories experienced on transmission, suspension and bracket components. The approach taken was to compare the counted spectra to the "raw" uncounted spectrum by determining the number of cycles at each level of load or load amplitude. The cumulative exceedances for the maximum load and load amplitude are plotted for the transmission, suspension and bracket spectra. Generally, both counting methods closely follow the maximum load exceedance curve for the raw spectra. The amplitude curves indicate that both counting methods have a greater number of higher amplitude reversals than the raw spectra. The curves of the rainflow counted spectra are generally higher than those for the range pair counted spectra. The rainflow counting algorithm generally produces more load amplitude cycles than the range pair algorithm. Fatigue damage calculations were prepared for correlation with the results of an experimental fatigue test program utilizing the load spectra previously described. The rainflow counted conditions consistently give higher fatigue damage in comparison with the range pair counted conditions. Both cycle counting algorithms result in adequate correlation with the rainflow counted predictions being slightly more conservative. Crack initiation predictions required a total of 34 seconds execution time using the range pair counting algorithm and 121 seconds using the rainflow counting algorithm. It is concluded that: both algorithms appear to be properly defining the most damaging cycles of candidate spectra that they encounter, as evidenced by the higher amplitude exceedance count in comparison to the raw counted spectra; the range pair counting algorithm produces typically 60 to 90% of the load amplitude cycles determined by the rainflow algorithm; the range pair algorithm requires less than two thirds the computer time needed for the rainflow program; and, finally, the rainflow counting algorithm is recommended over the range pair algorithm.

by J. M. Potter
Air Force Flight Dynamics Lab.
Rept. No. SAE-750046; 1975; 11p 8refs
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 034

A FRACTURE MECHANICS FATIGUE ANALYSIS OF TWO HIGH STRENGTH STEELS FOR TRACTOR EQUALIZER BAR APPLICATION

Using linear elastic fracture mechanics concepts, two high strength steels (D6-B and an experimental steel) quenched and tempered to Rockwell C 40-47 were evaluated for application in crawler tractor main frames. In design and selection of the experimental steel, consideration was given to the required base hardenability, chemical element cost, effect on hardenability, machinability, and the required strength gradient in the equalizer bar. Its chemistry was optimized using a digital computer procedure called the Computer Harmonized-Application Tailored or CHAT system. Fatigue crack growth tests were performed on closed loop electrohydraulic equipment under constant load amplitude with the minimum load equal to 100 lb and the maximum load equal to 1250 lb to 2500 lb. Fracture toughness tests were performed on precracked compact specimens. Accelerated constant amplitude fatigue tests were conducted on the forged equalizer bar components with high nominal bending stresses. Fatigue test data obtained from the theoretically constant stress equalizer bar included the number of cycles to crack initiation and to final fracture. Crack initia-

apparent crack initiation. This fatigue data, however, was used for comparison with fatigue crack growth data obtained from compact test specimens. It was concluded that: both experimental and D6-B steels had similar yield and tensile strengths, but, an inclusion induced ductility reduction occurred in the experimental steel as found by a decrease in elongation, reduction in area, and natural fracture strain; cyclic strain softening occurred in both steels, but, the experimental steel was too brittle in the transverse direction to cycle beyond the elastic region; the longitudinal plane strain fracture toughness was 30% lower for the experimental steel; by using cleaner experimental steel and a slightly higher experimental steel tempering temperature, the average longitudinal fracture toughness of the experimental was quite similar to the D6-B steel; theoretical fatigue crack growth life for D6-B steel was substantially greater than for the experimental steel, however, accelerated equalizer bar fatigue crack growth tests had similar crack growth life and total life for both steels. This discrepancy is attributed to through thickness microstructure and hardness gradients; inherent difficulty and vagueness of defining crack initiation; exclusion of stress intensity threshold levels in the crack growth model; the through thickness crack shape model used in calculating theoretical crack growth life; and material quality and crack plane deviations which occurred in the experimental equalizer bars.

by Robert D. Week; Ralph I. Stephens
American Hoist and Derrick Co.; Univ. of Iowa, Materials Engineering Div.
Rept. No. SAE-750047; 1975; 10p 8refs
Presented at the Automotive Engineering Congress and Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 035

EFFECT OF BALANCED BIAxIAL STRETCHING ON THE LOW CYCLE FATIGUE BEHAVIOR OF SAE 1008 HOT ROLLED LOW CARBON STEEL

The automotive industry is under considerable pressure to reduce the weight of its vehicles. The weight problem is being attacked in three ways: reducing car size; using higher strength to weight ratio materials, in particular high strength low alloy steels; and by more efficient design of components. In order to make optimum use of higher strength to weight materials and efficient component design, it is essential that the designer have accurate material property data of not only the material in the as-received condition, but in the press formed condition as well. The properties of SAE 1008 hot rolled low carbon steel, in the press formed condition assessed and described are: a pressing technique for the biaxial stretching of a hot rolled low carbon steel strip; the effect of this pre-straining on tensile properties; and the changes that occur in cyclic stress-strain and strain life response as a result of prestraining. Pressings were made on a 200-ton servo-controlled electrohydraulic press utilizing a punch with circular cross-section and flat bottom. The pressing consists of two pieces: a test piece and a steel pad with a hole drilled in it. By judicious choice of pad-hole diameter, large uniform strains and eventually failure can be induced in the flat region thus avoiding the usual failure at the punch radius. SAE 1008 hot rolled low carbon steel 0.179 in thick in the pickled and oiled condition was used for the testing. Fatigue test specimens with a 0.32 in gage length in the as-prestrained thickness were machined

by T. E. Parker; G. L. Montgomery
The Steel Co. of Canada, Ltd., R and D Dept.
Rept. No. SAE-750048; 1975; 12p 9refs
Presented at the Automotive Engineering Congress and Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

by T. E. Parker; G. L. Montgomery
The Steel Co. of Canada, Ltd., R and D Dept.
Rept. No. SAE-750048; 1975; 12p 9refs
Presented at the Automotive Engineering Congress and Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

HS-017 036

THE EFFECT OF CARBURIZING VARIABLES ON RESIDUAL STRESSES IN HARDENED CHROMIUM STEEL

Time and temperature curves for cylindrical specimens of chromium case hardening steel (Scr 22) during quenching were calculated. Using the carbon content in solution at points through the carburized layer, Ms temperatures (the temperature corresponding to the start of transformation from austenite to martensite) were determined. The amount of carbon dissolved in the martensitic matrix was obtained from the total carbon content and the volume quantity of carbide. Measured residual stress distributions were analyzed using the curves. The distribution of residual stress after carburizing and quenching was found to be significantly affected by the gradient of carbon content in the carburized area, the depth of the carburized layer, and the cooling rate from quenching. For carburized specimens the carbon content is high in the outer carburized area, so that the Ms temperature is lower than that in the core. Therefore, transformation usually starts in the carburized area, adjacent to or near the core. The location is determined by the cooling rate and the gradient of the carbon content in the carburized area. When the cooling rate is high, the temperature difference between the outer layer and the inner core is larger than when the cooling rate is low, and transformation starts in the carburized area near the core. Then it proceeds into the outer carburized area and the interior core area, where high internal stresses are generated by the transformation. When the case depth is 0.8 mm, undissolved carbide is found in the outer carburized layer, so the Ms temperature is low due to the low carbon content of the matrix. Therefore, the outer layer of the carburized case and the case-core boundary begin to transform at nearly the same time, with the area between transforming later. Also, a large amount of retained austenite is found in the outer layer of the case.

by Morito Motoyama; R. E. Ricklefs; J. A. Larson
Nissan Motor Co., Ltd., Central Engineering Labs. Div., Japan; Caterpillar Tractor Co.; Ford Motor Co.
Rept. No. SAE-750050; 1975; 10p 2refs
Presented at the Automotive Engineering Congress and Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

DESIGN AND SPECIAL DEVELOPMENT PROBLEMS OF MERCEDES-BENZ V-8 ENGINES

The Mercedes-Benz V-8 engines, their design as compared to U.S. V-8 engines, and development concerning exhaust emission control and fuel consumption are discussed. Also covered are special problem areas, and their respective solutions: the lubrication system, defoaming of the lubricant, noise generated by the lubrication system, and the adaptation of the hydraulic valve clearance adjustment to high engine speeds. The 4.5 liter American version of the Mercedes-Benz demonstrates a 16% power loss as compared to its European counterpart. In view of the valid hydrocarbons and nitrogen oxides standards, the height and area of the quench zone in the combustion chamber were altered, which resulted in slower combustion. To limit the effect of the overlap on hydrocarbons emissions, the opening time of the valves had to be reduced which resulted in a loss of volumetric efficiency. The compression ratio had to be reduced because of the 1975 nitrogen oxides standard. Due to the installation of oxidation catalysts, the exhaust gas back pressure is considerably higher in the American than the European version. Oil foam becomes a problem when, with a very shallow oil pan, oil flowing back from the rear to the front into the oil sump is churned by the rotating engine parts. Tests were made on a truck diesel engine and passenger car engines mounted on a tilting test bench. The amount of air in the oil was analyzed continuously by radioactive radiation. It was found that there is a relatively large range in the amount of oil that is in the engine where the degree of foaming is more or less constant. Outside this range the amount of air contained in the oil increases rapidly. It was also found that there is a marked reduction in the amount of foaming in the case of right hand tilts if all leaks on the suction side of the pump are eliminated. The conditions of oil return from the cylinder head to the sump can be improved by using an extra return pipe outside the crankcase. Optimum lubricating conditions can be achieved by integrating the relief valve into the oil pump. It was found that a crescent-type oil pump with a gear ratio of 30/36 almost completely eliminates pressure fluctuations which can cause noise, but its power requirements are very high. The gear-type pump, therefore is to be preferred. Tests were made, finally, on valve lifters. Because it proved to be impossible to remove air that had penetrated into the element within a short enough time, suction-type lifters were abandoned altogether. A pressure-fed hydraulic lifter proved to be the most effective. The decisive factor for absolutely reliable operation was the vent holes provided at the top where air and oil can escape alongside the piston through these holes. Several engines with hydraulic lifters were subjected to durability runs over 150,000 km. During these tests no major faults were detected. The engines were further subjected to a 600-hour cyclic bench test of established severity. Additional tests such as repeated cold starts, and endurance tests with hot/cold engines were also carried out, and it is now felt that the development of hydraulic valve lifters for high-speed engines has reached a satisfactory level.

by Kurt Olander; Bertold Mayr
Daimler-Benz A.G., Germany
Rept. No. SAE-750051; 1975; 12p
Presented at the Automotive Engineering Congress and
Exposition, Detroit, Mich., 24-28 Feb 1975.
Availability: SAE

UNIFORM TIRE QUALITY GRADING-- TREADWEAR. FINAL REPORT

The treadwear testing followed the Uniform Tire Quality Grading-treadwear procedure as published in the Federal Register on Jan. 4, 1974 (Docket 025-notice 07). In this test procedure the route is selected such that the NHTSA Control Tire is worn to a specific level in 16,000 miles. A 60 to 70% Control Tire treadwear goal was selected after preliminary trials indicated that a higher wear level could only be obtained by using excessive speed on curves. Using this common treadwear goal for all the test routes, the various single car, single 4-car convoy and dual 4-car convoy tests required significant, but practical, "in the field" route adjustments. The data showed the amount of treadwear decreases as the number of vehicles in the convoy increases. The treadwear obtained from similar vehicle models of two different car manufacturers were compared. Using the 7.75-14 NHTSA Control Tires as the measuring device the 1974 Ford Torino was 5% better for treadwear than the 1974 Plymouth Satellite. In the first phase, the 7.75-14 NHTSA Control Tires (Armstrong Tire-Sep 1974) were used to rate six groups of special and commercial tires. In the second phase, 8.55-15 NHTSA Control Tires (Armstrong Tire-Aug 1974) were used to rate three groups of San Angelo Course Monitoring Tires. In each phase, the wear averages and crown radii were determined, and anti skid measurements were taken.

South Texas Tire Test Fleet, Inc., Drawer J, Devine, Texas
Contract DOT-HS-4-00896
1975; 74p
Rept. for Jul-Dec 1974.
Availability: NTIS

HS-801 612

DRIVER WORKSPACE STATE-OF-THE-ART ANALYSIS. FINAL REPORT [FIXED-SEAT, ADJUSTABLE CONTROLS]

The merits of using a fixed-seat, adjustable controls concept to provide adequate driver accommodation in production-type automobiles are determined and reported. It is concluded that the concept not only is feasible but that it offers certain crashworthiness and probable cost advantages compared with current adjustable seat concepts. Although either concept could provide adequate driver accommodation, certain constraints on styling are needed in order that each realize its maximum benefit. While complete adjustment flexibility of both seat and controls may provide maximum optimization of the driver workplace, such an arrangement would not be cost-effective and there is no assurance that drivers might not misuse the capability to their own detriment. A completely fixed seat plus an adjustable pedal assembly appears to offer maximum cost/operability benefits. However, this approach requires considerable control over other vehicle characteristics and therefore should be studied in greater detail using mockups and live subjects to determine interaction with various vehicle models and styling.

by W. E. Woodson; P. H. Selby
Man Factors, Inc., 4433 Convoy St., San Diego, Calif. 92111
Contract DOT-HS-4-00981
Rept. No. MFI-75-104; 1975; 135p 120refs
Rept. for 28 Jun 1974-28 Feb 1975.
Availability: NTIS

HS-801 613

HS-801 613

**MOTOR VEHICLE SAFETY DEFECT RECALL
CAMPAIGNS, JANUARY 1, 1975 TO MARCH 31,
1975. DETAILED REPORTS**

Letters of notification and other communications to dealers and their customers regarding possible defects in vehicles produced by domestic and foreign manufacturers are presented without commentary.

National Hwy. Traffic Safety Administration, Washington,
D.C. 20590
1975 ; 595p
Availability: NTIS

HS-801 615

**SCHOOL BUS SAFETY IMPROVEMENT PROGRAM.
SUMMARY REPORT**

by P. Boulay; S. Davis
Ultrasystems, Inc., Dynamic Science Div., 1850 West Pinnacle
Peak Rd., Phoenix, Ariz. 85027
Contract DOT-HS-046-3-694
Rept. No. 2310-74-138A; 1975; 35p 2refs
Rept. for Jun 1973-Apr 1975. For abstract, see vol. 1, HS-801
616 (Final Report). See also vol. 2, HS-801 617 (Final Report
Appendices).
Availability: NTIS

HS-801 616

**SCHOOL BUS SAFETY IMPROVEMENT PROGRAM.
VOL. 1. FINAL REPORT**

Data indicate that school buses are a relatively safe method of transportation, yet their safety should be continually evaluated. Recent technological advances in vehicle crashworthiness, occupant protection, and accident avoidance capabilities, where applicable, should be applied to school buses. To develop an improved bus structure producible with modest costs and weight increases over current buses was the main objective of the work of the School Bus Safety Improvement Program. Safety, driver field of view, acceleration and passing, braking, and handling characteristics of typical school buses are evaluated. Structural and accident avoidance tests were performed on two Baseline Buses. An Improved Bus was designed and two Improved Buses were fabricated for evaluation. Summaries of the various tests are tabulated. More detailed test procedures and additional data on Crash Injury Reduction tests, computer structural analyses and simulation, and the various load analyses are summarized in the Appendices. The tests on the Improved Bus showed that structural improvements of 33 to 57% were achieved with a cost increase of only \$500 (4.5%) and a weight increase of only 530 pounds (3.9%). Acceleration and passing, braking, and handling tests showed that the added weight had not degraded performance in these areas. Based on these results, school bus structural standards and feasible compliance test procedures are recommended. Other recommendations are made for improved emer-

HSL 75-11

gency egress, driver field of view, and handling test procedures.

by P. Boulay; S. Davis
Ultrasystems, Inc., Dynamic Science Div., 1850 West Pinnacle
Peak Rd., Phoenix, Ariz. 85027
Contract DOT-HS-046-3-694
Rept. No. 2310-74-138B; 1975; 195p
Rept. for Jun 1973-Apr 1975. See also Vol. 2, Appendices, HS-
801 617 and Summary Report, HS-801 615.
Availability: NTIS

HS-801 617

**SCHOOL BUS SAFETY IMPROVEMENT PROGRAM.
VOL. 2. [APPENDICES] FINAL REPORT**

Appendices are presented for a program designed to develop an improved school bus structure producible with modest cost and weight increases over current buses. Results from the following tests are given: an evaluation of the safety characteristics (exterior lighting, marking and identification, egress characteristics, interior design and seats, mirrors, driver assessment of instruments, controls and handling); brake tests (pedal force test, emergency braking test, fade and recovery test); acceleration and passing tests; handling tests; sinusoidal steer test; component tests; static side pole loading test; dynamic side pole test; static diagonal roof loading tests; and static vertical roof tests. A computer analysis and evaluation of the improved bus design is included.

by Paul Boulay; Sol Davis
Ultrasystems, Inc., Dynamic Science Div., 1850 West Pinnacle
Peak Rd., Phoenix, Ariz. 85027
Contract DOT-HS-046-3-694
Rept. No. 2310-74-138B; 1975; 417p
Rept. for Jun 1973 - Apr 1975. See also Vol. 1, HS-801 616 and
Summary Report, HS-801 615.
Availability: NTIS

HS-801 621

**BREATH MEASUREMENT INSTRUMENTATION IN
THE U.S.**

The various ways in which breath test technology has been applied in traffic law enforcement is described, including the legal environment within which new equipment is employed. A legal cornerstone of breath measurement law is the implied consent statute now in force in each state (implied consent being tied to the driving privilege). Complimenting this statute are two more recent laws, the illegal per se law, and the pre-arrest screening law. The illegal per se makes it a violation of law, in and of itself, to drive with a blood alcohol concentration (BAC) over a specified limit (generally 10%). The pre-arrest screening law enables drivers to be tested for a BAC without an actual violation and to be subsequently charged (if warranted) with an alcohol-traffic offense. The operation of six basic types of breath measurement instrumentation is explained. The six types are: screening breath testers, including both the disposable reagent and the electromechanical type; evidential breath testers, including those using gas chromatography, photometric colorimetry, and infrared photometry; roadside collection devices, also using gas chromatography, but at the scene; passive breath testers, like the breath "sniffer"; educational tester, through such programs as NHTSA's Alcohol Safety Action Program (ASAP); and al-

cohol safety interlock systems, requiring the passage of a per-
formance or a breath test prior to starting a car.

by J. V. Moulden; R. B. Voas
National Hwy. Traffic Safety Administration, Washington,
D.C.
1975; 31p 4refs
Availability: Corporate author

HS-801 629

A STATISTICAL RELATION BETWEEN CAR WEIGHT AND INJURIES

Accident data from New York and North Carolina police re-
ports have been analyzed to obtain quantitative expressions of
the relationships between vehicle weight and the likelihood of
serious injury to the driver. In two-car crashes, the chance of
serious or fatal injury to an unbelted driver decreased by
about 5% for each 100 lbs. additional weight in his car, and in-
creased about 2% for each 100 lbs. increase in the weight of
the other car. In both States, there was a small variation of
single vehicle crash injury rate with car weight. The analysis
results implied that: removing all larger cars from the
highways and replacing them with compact and smaller cars
would not reduce overall injury rates and might increase them,
unless the smaller cars offer more protection than they do
now; in a two-car crash, the likelihood of injury is more de-
pendent upon the weight or size of one's own car than upon
the difference in weights between the cars; and car weight
disparities increase the injury rate in individual two-car colli-
sions, but changes in the average weight (or size) of the ve-
hicle population appear to be a much more significant factor.

by Donald F. Mela
National Hwy. Traffic Safety Administration, Office of
Statistics and Analysis
Rept. No. NHTSA-TN-N43-31-8; 1975; 16p 4refs
Presented at the SAE Automotive Engineering Congress and
Exposition, Detroit, Mich., 25 Feb 1975.
Availability: Corporate author

HS-801 630

AN INVESTIGATION OF THE JOINT INJURY DISTRIBUTION OF BELTED AND UNBELTED DRIVERS IN AUTOMOBILE ACCIDENTS. FINAL REPORT

Using 1973 and 1974 accidents in North Carolina, a theoretical
joint injury distribution of belted and unbelted occupants is
constructed and analyzed. This bivariate distribution cor-
responds to a theoretical setup where each real accident has
its imaginary twin "occurring" independently under the "same"
conditions. In one of the cases, the occupant is belted while in
the other case he is not. To form such "twins," all matches are
created between belted and unbelted drivers within similar
crashes (i.e. within a given cell out of 396) as determined by
car size and model year, traffic accident data area and severity
and by occupant's age. The obtained bivariate injury distribu-
tion was then weighted to correspond to the distribution of the
reference population over the 396 strata. The corresponding
shift in the injury distribution is then examined. It was con-
cluded that about 21% of "any injuries" to drivers could have
been turned into "no injury", about 2 out of 3 "fatalities"
could have been prevented, and approximately 1 out of 2

severe injuries or fatalities could have been reduced to a
moderate, low, or no injury, had the seat belt been used.

by Yosef Hochberg
University of North Carolina Hwy. Safety Res. Center, Craige
Trailer Park, Chapel Hill, N.C. 27514
Contract DOT-HS-4-00897
1975; 14p 4refs
Rept. for 1 Jan-31 Mar 1975.
Availability: NTIS

HS-801 631

TRI-LEVEL STUDY OF THE CAUSES OF TRAFFIC ACCIDENTS: INTERIM REPORT 2 (VOL. 2: RADAR AND ANTI-LOCK BRAKING PAYOFF ASSESSMENT). FINAL REPORT

A subset of accidents investigated in-depth by a multidiscipli-
nary accident investigation team (MDAIT) has been examined
to assess the benefit derived from the hypothetical application
of various combinations of radar and anti-lock braking
systems. A total of 215 accidents, which are generally
representative of all police-reported accidents in terms of such
variables as severity and road surface condition, have been
considered. The approach has been to have an accident analyst
evaluate on a case-by-case basis the benefit which would have
been derived if one or more of the vehicles involved in each
accident had been equipped with various types and combina-
tions of these hypothetical systems. A total of ten system
types or combinations were defined, composed of five ele-
ments: cooperative radar, non-cooperative radar, rear-wheel
anti-lock, four-wheel anti-lock and radar actuation. On one ex-
treme, it was found that two-wheel anti-lock systems, by
themselves, have relatively very little accident prevention
potential; only one of the 215 (.5%) would definitely have been
prevented by such a system, although with less assurance
there was some possibility of prevention of up to eight ac-
cidents (3.7%) by such a system. On the other extreme, the
most complex of the systems defined, comprised of a non-
cooperative radar system with both actuation and warning
potential, coupled with a four-wheel anti-lock system would
definitely have prevented 39 of the accidents (18.0% of total),
with some possibility of up to 90 of the accidents (41.9% of
total).

Indiana Univ., Inst. for Res. in Public Safety, 400 East
Seventh St., Bloomington, Ind. 47401
Contract DOT-HS-034-3-535
Rept. No. DOT-HS-034-3-535-74-TAC-(2); 1975; 113p 4refs
Rept. for 15 Aug 1973-15 Aug 1974.
Availability: NTIS

HS-801 633

UNIFORM TIRE QUALITY GRADING-- TREADWEAR. FINAL REPORT

Wear tests were conducted to determine vehicle reaction on
the 8.5-15 SAE-bias constructed standard traction tire as
manufactured by General Tire and Rubber Co. This SAE-
biased tire was compared with Firestone Deluxe Champion
and B.F. Goodrich Silvertown Belted tires. Two types of ve-
hicles were used with different forms of suspension (1973 Dodge
Polaris and 1973 Mercury Monterey). All tire measurements
were taken at specified intervals. Two identical vehicles of the
two vehicle types were used in the testing. All tread depth

measurements were made using a hand held gauge with the tire dismounted. Tire physical measurements of circumference, section width, tread width, tread radius and durometer were made at intervals specified using equipment as specified under Instructions to Laboratory Testing under FMVSS109. All measurements as well as use history were recorded on data sheets, which, along with photographic comparisons, are provided. A total of 16,000 miles of interstate and state highways were driven. Test results were inconclusive. Since all but one tire in one of the comparison groups failed, as well as three of the SAE-biased tires, it was not possible to draw any conclusions as to the effect of vehicle reaction on wear rates on SAE Traction Tires. Also because of route changes in order to attempt to obtain the required wear percentage, it was not possible to draw valid conclusions on vehicle effect even if the wear intervals of mileage were used. The wear data spread that was derived by finding the difference between the lowest and highest wear rate of each tire within a group seemed to indicate that the spread in data in the control group (SAE-biased tires) was greater than the spread in the data of the production tires.

by J. Shearer
Compliance Testing, Inc., 1150 N. Freedom St., Ravenna,
Ohio 44266
Contract DOT-HS-026-3-605
1975; 82p
Test period July 1973.
Availability: NTIS

HS-801 634

VEHICLE DIRECTIONAL CONTROL DURING BRAKING-IN-A-TURN. VOL. 1--SUMMARY REPORT. FINAL REPORT

by R. S. Rice; J. A. Davis
Calspan Corp. P.O. Box 235, 4455 Genesee St., Buffalo, N.Y.
14221
Contract DOT-HS-4-00971
Rept. No. ZP-5565-V-1 ; 1975; 30p
Rept. for 1 Jul 1974-30 Apr 1975. For abstract see (HS-801
635).
Availability: NTIS

HS-801 635

VEHICLE DIRECTIONAL CONTROL DURING BRAKING-IN-A-TURN. VOL. 2--TECHNICAL REPORT. FINAL REPORT

A full-scale test procedure for evaluating the performance of vehicles in this combined braking while turning control situation is identified and described. The general test approach was to perform a wide variety of full-scale experiments covering a range of operational and procedural factors: initial speed and lateral acceleration, surface condition, vehicle physical characteristics, brake system design, and driver control influences. Most of the procedure development testing was performed with two vehicles: a 1971 Chevrolet Townsman station wagon and a 1973 Pinto sub-compact sedan. Tests with these vehicles were supplemented with a series of runs using a 1965 Ford Mustang, previously equipped with a modified braking system permitting selective braking of any wheel or combination of wheels. This vehicle was utilized to assure that the procedure could effectively discriminate performance characteristics of vehicles differing from the norm. A special purpose pneumatic

cally charged brake application device was designed, in order to provide a relatively simple system for producing directly measurable brake pedal forces. Measurements recorded were: longitudinal acceleration, yaw rate, steering wheel angle, brake pedal force, speed, and lateral acceleration. The basic test maneuver involved establishing steady state cornering conditions on a constant radius arc followed by a constant brake pedal force application to bring the vehicle to a complete stop. Over 500 test runs, consisting of specific subsets of tests aimed at evaluating different operational test factors were performed. The principal accomplishments were: the development of a detailed test procedure for combined cornering-braking vehicle evaluations with fixed steering control under dry surface conditions; the evaluation of a companion procedure which permits use of the steering system in attempts to maintain path control under the same test conditions as above; and investigation of the requirements for developing details of a similar procedure for low coefficient of friction conditions; and evaluation of a large number of factors affecting performance, including initial speed, initial lateral acceleration, vehicle braking system characteristics, loading, steering control mode, braking control mode, course definition, and performance metrics.

by R. S. Rice; J. A. Davis
Calspan Corp., P.O. Box 235, 4455 Genesee St., Buffalo, N.
Y. 14221
Contract DOT-HS-4-00971
Rept. No. ZP-5565-V-1 ; 1975 ; 127p 6refs
Rept. for 1 Jul 1974-30 Apr 1975. For summary report, see HS-801
634.
Availability: NTIS

HS-801 636

METHODS EMPLOYED BY ASAP ENFORCEMENT COUNTERMEASURES TO RECORD THE BEHAVIOR OF DRINKING DRIVERS. FINAL REPORT [VOL. 1]

The enforcement of measures of Alcohol Safety Action Projects (ASAP's) have been responsible for the identification and apprehension of drinking drivers on the nation's highways, in an effort to achieve the following objectives: an overall reduction of those motor vehicle accidents where the consumption of alcohol was causative, or where it was involved in any manner; a gradual reduction in the average blood-alcohol concentration (BAC) of drinking drivers; and a general decrease in the number of drinking drivers. ASAP measures encompass the following interdependent areas: enforcement, judicial, rehabilitation, and public information and education. This study concerns itself with processes, methods, and techniques employed by 22 nationwide ASAP sites to record the behavior, vital statistics, BAC, and other appropriate details pertaining to drinking drivers who have, by means of their arrest, been introduced into the criminal justice system. The recording methodology examined included the following: the development and utilization of forms and documents; video tape recording with the purpose of capturing photographically and audibly, the drinking driver's performance and response to instructions; the use of audio recording devices for the purpose of recording the driver's comments and replies, as well as the applicability of these devices to field use; and any other aids employed to record information for use as evidence. Copies of the principal forms used in connection with alcohol involved traffic offenses at the 22 sites are provided, as well as some of

the specific procedures used at some of the sites involving the use of video tape recording, and in the arresting process.

by M. J. Apsey; J. C. Cobb, Jr.; G. W. Loveless
Planning and Human Systems, Inc., 3301 New Mexico Ave.,
N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975; 507p 1ref
Rept. for Jun 1974-Jul 1975. This is vol. 1 of 6 vols. Vol. 2 is
HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5
(comprised of parts A-D) is HS-801 695 -- 698; and vol. 6
(comprised of 22 parts) is HS-801 670 -- 691.
Availability: NTIS

HS-801 637

SOCIETAL CONSEQUENCES OF TITLE 2 OF PUBLIC LAW 92-513: "MOTOR VEHICLE INFORMATION AND COST SAVINGS ACT." FINAL REPORT.

The results of the study directed to predict the outcomes resulting from an assumed implementation of Title 2 of Public Law 92-513, so that information on the full range of beneficial and adverse consequences of it might be obtained, are described. Title 2 required the Secretary of Transportation to investigate methods to determine the damage susceptibility of passenger motor vehicles, the degree of crashworthiness of such vehicles, and the characteristics of such vehicles with respect to the ease of diagnosis and repair of mechanical and electrical systems which fail during use or which are damaged in motor vehicle accidents. The conceptual approach for the conduct of the study and the events and influencing factors which cause changes in the characteristics of the automobile population are described. The simple accident model used in the study and the results of sensitivity analyses using the model, the new car sales model and the 22 societal elements which comprise it, and the four societal elements of the Car Operations Model are described. The general role of scenarios in the study, including the results for four extreme scenarios that involve total market shifts to single classes of cars, is discussed and a small number of more realistic scenarios is analysed. Support information from the study, such as references, details of the private consumer study and the brief fleet buyers study, and the data bases for the three societal consequences models are contained in the appendices.

by G. M. Northrop
Center for the Environment and Man, Inc., 275 Windsor St.,
Hartford, Conn. 06120
Contract DOT-HS-4-00887
Rept. No. CEM-4164-524; 1975; 188p 90refs
Rept. for May 1974-Mar 1975.
Availability: NTIS

HS-801 638

ANTHROPOMETRIC DIMENSIONS REPRESENTATIVE OF AVERAGE THREE AND SIX YEAR OLD CHILDREN SIZES FOR THE CONSTRUCTION OF MASTERMODEL BODY FORMS. FINAL REPORT

Mastermodel body forms were created on the basis of available U. S. population data and/or estimates interpolated from such data and on the basis of the collective judgement of a panel of experts in anthropometry. Ninety-eight dimensions

were generated to describe the external morphology of the children. The description includes dimensions and definitions for each of the measurements, as well as the associated landmark definitions.

by J. W. Young; J. T. McConville; H. M. Reynolds; R. G. Snyder
Civil Aeromedical Inst., FAA; Webb Assocs; Hwy. Safety Res. Inst.
Rept. No. AAC-119-75-2; 1975; 34p 18refs
Rept. for Sept 1974-Apr 1975.
Availability: NTIS

HS-801 640

CRUSH CHARACTERISTICS OF AUTOMOBILE STRUCTURAL COMPONENTS. FINAL REPORT

Static and dynamic test procedures were developed for evaluating the crush characteristics of automotive structural components which perform a major structural function in side impacts. Laboratory tests were conducted on several 1969 to 1971 4-door intermediate size automobiles to evaluate the crush characteristics of some of their structural components. Static crush tests were conducted in the 12-million-lbf universal testing machine at The National Bureau of Standards, employing its large working space. The dynamic tests were conducted using the monorails attached to the sensitive crosshead and the tie-down floor system which is incorporated in the foundation of this machine. The crush loads were applied perpendicular to the vehicle side for each of the tests. The response of the structural components was established based on the evaluation of displacement and/or strain measurements and detailed examination of the permanently deformed components following each test. Empirical factors were obtained which are useful for comparison of static and dynamic crush characteristics of a vehicle side door structure over a limited loading range. Further development of the test procedures is required in order to extend the range over which such results would be meaningful.

by Donald C. Robinson
National Bureau of Standards, Washington, D.C. 20234
Contract DOT-HS-4-00793
Rept. No. NBSIR-74-605; 1975; 67p 9refs
Availability: NHTSA

HS-801 641

ESTIMATES OF THE SOCIOECONOMIC IMPACT OF IMPLEMENTATION TITLE 2 OF THE MOTOR VEHICLE AND COST SAVING ACT. FINAL REPORT

The results of the study to estimate the effects of implementing Title 2 of the Motor Vehicle Information and Cost Saving Act during its first year of implementation (December 1, 1975 through November 30, 1976) are described. Under the terms of Title 2, the National Highway Traffic Safety Administration will gather, analyse, and disseminate to the public, information on the crashworthiness, damageability, ease of repair, and insurance costs of given makes and models of passenger automobiles. Primary impacts (effects on market shares of given make models) of passenger automobiles and secondary impacts (effects on usage of gasoline and raw materials, automobile insurance costs and methods of setting rate structures, dealer profit margins, costs of repairs, serious injuries, and fatalities, and broad socio-political effects) are differentiated

The nature and purpose of Title 2 and the possibility of undesirable side effects are described. The methods and results of estimating the primary effects or impact are described. An overview of secondary effects is given and the estimated impact on gasoline and raw material usage, on the insurance industry and insurance rates, including the prospects for make/model rate differentiation and the potential influence of crashworthiness and damageability on rates, on the economy, including dealer profit margins, cost of damage repair, cost of preventive and corrective maintenance and the generation of wrecked vehicles and their replacement costs, on serious injuries and fatalities and the broad sociopolitical influences and effects are systematically presented. It is concluded that implementation of Title 2 will not be likely to result in significant cost savings to the public in its first year of implementation, given the use of economic criteria for placing a value on human lives, the inverse relationship between crashworthiness and damageability, and the association of crashworthiness with heavier and more expensive automobiles. If Title 2 is continually implemented over a period of 10 years, however, its primary effects will have been much greater.

by A. S. Morton
Arthur D. Little, Inc., Acorn Park, Cambridge, Mass., 02140
Contract DOT-HS-4-00888
1975 ; 263p
Rept. for May 1974-Feb 1975. See also HS-801 642
Availability: NTIS

HS-801 642

ESTIMATES OF THE SOCIOECONOMIC IMPACT OF IMPLEMENTING TITLE 2 OF THE MOTOR VEHICLE INFORMATION AND COST SAVINGS ACT. SUPPLEMENT TO APPENDIX A. FINAL REPORT

Two complete Delphi questionnaire booklets are presented, identical to those sent to Dealer and Marketer Delphi participants in Round 2 of the study using that method to estimate future Title 2 impact. Substantive changes from the two examples, Round 2 Dealers and Round 2 Marketers, made in Round 1 Dealers and Round 1 and Round 3 Marketers, are inserted on the back of each booklet.

by Anton S. Morton
Arthur D. Little, Inc., Acorn Park, Cambridge, Mass. 02140
Contract DOT-HS-4-00888
1975 ; 58p
See also HS-801 641. Rept for May 1974-Feb 1975.
Availability: NTIS

HS-801 645

RULES OF THE ROAD RATED

An annual rating of state traffic laws is presented, to show how they compare with the rules of the road part of the Uniform Vehicle Code as of January 1, 1975. Prior ratings were based on state traffic laws as they existed in 1968, 1971, 1972 and 1973. This rating covers 1974 state traffic laws but does not include changes adopted by state legislatures in 1975. Traffic Laws Annotated shows how state traffic laws compare with provisions in the "Rules of the Road" chapter of the Uniform Vehicle Code in over 150 "Statutory Annotations." Reading these Annotations would provide a general picture of the traffic laws in any one state. Any law that differs from a

section in the Uniform Vehicle Code could also be detected by reading all the Annotations. An attempt is made to provide a more precise picture of the status of state traffic laws as of January 1, 1975 that will facilitate rapid identification of particular areas of a state's laws that may not be in substantial conformity with the Code, indicate areas of the statutory law where uniformity may be markedly poor on a nationwide basis, and identify states whose traffic laws may need substantial attention on a priority basis as part of contemporary efforts to improve highway safety. This document, when used with Traffic Laws Annotated, is particularly useful in determining which laws in any one state differ from provisions in the Code and from laws in other states.

by Edward F. Kearney
National Com. on Uniform Traffic Laws and Ordinances
Contract DOT-HS-5-01121
Publ: Traffic Laws Commentary v4 n1 (May 1975)
1975 ; 33p refs
Availability: GPO \$.85 Stock no. 050-003-00218-6

HS-801 646

FEASIBILITY STUDY OF PLASTIC AUTOMOTIVE STRUCTURE. PROGRESS REPORT, MAY 1975

The integration of plastics in automotive structures is studied in terms of crush tests, vehicle weight reduction and energy savings, and application in frontal system design, fabrication and testing.

Budd Co., Technical Center, 300 Commerce Drive, Ft. Washington, Pa. 19034
Contract DOT-HS-4-00929
Rept. No. PR-MAY-75 ; 1975 ; 8p
Availability: Reference copy only

HS-801 647

SUBCOMPACT CAR CRASHWORTHINESS PROGRAM. PROGRESS REPORT, MAY 1975

Results of the effort to refine the weight-history of the modified cars and an attempt to allocate the increased weight to the various zones of protection is reported. Results of an oblique 30 mph impact of a full-sized Ford into a modified Pinto showed that the driver dummy suffered a head strike on the door glazing, but it appeared to be minor, resulting in a head injury criterion of 35 and a chest severity injury of about 50. The rear seat dummy also appeared to enjoy a reasonable environment.

Minicars, Inc., 35 La Patera Lane, Goleta, Calif. 93017
Contract DOT-HS-113-3-746
Rept. No. PR-May-75; 1975; 43p
Availability: Reference copy only

HS-801 649

IDENTIFICATION OF CURRICULUM MATERIALS AND CORRELATION WITH HIGHWAY TRAFFIC SAFETY MANPOWER JOB FUNCTIONS. FINAL REPORT

A project designed to develop a resource guide for use by highway traffic safety program planners is described. Given a functional requirement, the guide should enable pertinent edu-

December 30, 1975

HS-801 655

cation and training materials to be identified, described and consequently obtained. The final project outcome was a 3-volume guide entitled Personnel Development and Training Guide for Highway Traffic Safety Programs. The objectives in accomplishing the guide were to: identify worker performance functions conducted by highway traffic safety personnel; classify these worker performance functions as to all manpower, generic, or highway traffic safety specific; write student behavioral objectives for each of the worker performance functions; identify available curriculum materials that will meet the stated student behavioral objectives; and produce a training resource guide for program planners and administrators and a final project report to be submitted at the end of the project. It is concluded that: training program development can be enhanced by utilizing the Guide; the alphabetic listing of highway traffic safety specific performance functions allows the program planner and administrator flexibility in structuring training programs across all highway traffic safety program areas; the arrangement of highway traffic safety specific performance functions by the Department of Labor's work fields allows the planner and administrator to identify commonalities in the stated purpose of the functions; there existed within some curriculum sources training for non-highway traffic safety specific functions; many highway traffic safety curriculum developers do not utilize a task analysis approach for identifying training requirements; student behavioral objectives were found to be useful in identifying learning outcomes which are required by workers in executing job requirements; instructional packages developed under contract to NHTSA are currently of highest value; a standard level of specificity for stating performance functions and student objectives cannot be achieved unless a task analysis of each highway traffic safety occupation is conducted; readily available curriculum materials which relate to student behavioral objectives and performance functions in the litigating and administering work fields do not exist; and most of the identified worker performance functions are found to be in the appraising work field.

by Norval L. McCaslin; Sandra R. Orletsky; Valija M. Axelrod
Ohio State Univ., Center for Vocational Education, 1960
Kenny Rd., Columbus, Ohio 43210
Contract DOT-HS-4-00979
1975; 98p 21reft
Rept. for 1 Jul 1974-30 Jun 1975.
Availability: NTIS

HS-801 651

FIELD EVALUATION OF RECTANGULAR HEADLAMPS. FINAL REPORT

An analytical and empirical investigation evaluated use of rectangular headlamps during the present interim allowance period. If the option is extended, it is forecast that 77 million passenger cars with rectangular headlamps will be on U.S. roads in 1985, about 62% of the forecast 1985 passenger car registrations. Telephone interviews were conducted with a representative sample of owners of 1975 automobiles equipped with rectangular headlamps: 71% of the interviewees liked the headlamps, 5% disliked the feature and the remainder reported that they didn't notice or didn't care. A survey of GMC

ported stockage of the conventional Types 1 and 2 headlamps. Mechanical aimers capable of aiming the rectangular lamps are distributed in approximate accord with the number of state automobile registrations. Field testing of the accuracy with which headlamps are aimed indicated that the rectangular lamps are aimed at least as accurately as are the conventional lamps. The facilities sampled in L.A. performed significantly better than the N.Y.C. facilities with respect to aiming both the rectangular and conventional headlamps. The N.Y.C. facilities aimed the rectangular lamps significantly more accurately than the conventional headlamps.

by Richard L. Krumm
Essex Corp., 201 North Fairfax St., Alexandria, Va. 22314
Contract DOT-HS-5-01100
Rept. No. 3521-1; 1975; 48p
Availability: Reference copy only

HS-801 652

DWI INSTRUCTOR TRAINING INSTITUTE: FINAL REPORT

The conduct of the five 5-day instructor training institutes held in various areas of the country is reported. Potential instructors were introduced to the National Highway Traffic Safety Administration (NHTSA)-developed curriculum materials for DWI (driving while under the influence) law enforcement training. The DWI training program was designed to improve the alcohol enforcement activities of the patrol officer and to train potential instructors in methodology pertinent to the curriculum package. A set of detailed lesson outlines assured consistency of coverage at each institute while allowing for variation in instructor style. The emphasis of the institutes was the development of teaching skills in contrast to police alcohol traffic enforcement skills. Included were teaching methodology topics, DWI curriculum specific topics, practice teaching workshops, and a review session. Eighty-eight percent of the enrollees report that they are currently scheduled to be on-line DWI law enforcement instructors. Ninety-four percent of the enrollees expected that their organizations (representing 43 states, the District of Columbia, NHTSA, the Indian Nation, and the U.S. Park Police) will use all or some of the NHTSA curriculum materials in their future police alcohol traffic enforcement training. Eighty-four percent of the enrollees reported that the institute was quite or very valuable to them. The institutes proceeded on schedule and ran smoothly. As a result of the success of this institute series, as well as of others conducted by NHTSA for various occupational specialties, it is recommended that NHTSA continue to sponsor instructor training institutes for its new curriculum packages.

by A. M. Cleven; J. F. Oates; J.T. Fucigna
Dunlap and Associates, Inc., One Parkland Drive, Darien,
Conn. 06820
Contract DOT-HS-4-00959
Rept. No. ED-75-7; 1975; 182p
Rept. for Jul 1974-Jun 1975.
Availability: NTIS

HS-801 655

TEST REPORT FOR NHTSA-5-2191 [HYBRID 2

Hybrid 2 dummies manufactured by Humanoid Systems of Hawthorne, Calif. Different dummies were put through the various tests: neck certification test; static tests; femur impact test; high and low velocity thoracic impact tests; abdominal test; lumbar spine test; head drop test; and pendulum neck tests. The results are recorded. Recommendations and observations are made regarding areas that need to be watched for discrepancies or difficulties in the conduct of future testing. Ambiguities are pointed out in the test procedures of the femur impact test, in the head drop test regarding the application of materials to the head prior to testing, in the method of data collection on the lumbar spine test, and in the pendulum neck test regarding the thickness of the neck skin and the dimensional specifications for the neck mounting plate

Minicars, Inc., 35 La Patera Lane, Goleta, Calif. 93017
1975; 138p
Test results collected under Purchase Order 5-2191.
Availability: Reference copy only

HS-801 656

LEGAL ASPECTS OF ALCOHOL AND DRUG INVOLVEMENT IN HIGHWAY SAFETY--ALCOHOL COUNTERMEASURES LITERATURE REVIEW. FINAL REPORT

Legal literature and also information published in scientific and other nonlegal journals having some relevance to legal issues have been included in this review. The literature has been treated in the following categories: alcohol ingestion and driver performance--experimental studies (laboratory derived information); alcohol ingestion and driver performance--field studies (information derived from such sources as police records); measurement of blood alcohol and drug concentrations (concerning publications dealing with measuring techniques and devices and measurement validity); identification of problem drinking drivers (dealing with studies of identification after an alcohol involved driving incident or through a routine screening process while applying or renewing driver's licenses); evaluation of countermeasures (especially concerning Alcohol Safety Action Programs); and legal and constitutional issues in anti-drinking driver enforcement, adjudication, and sentencing. Although this review includes both alcohol and drug related publications, very few publications concerning legal aspects of drugs were available.

by J. W. Little; M. Cooper
National Safety Council, 425 N. Michigan Ave., Chicago, Ill. 60611
Contract DOT-HS-4-00965
1975; 27p 80refs
Report for 1973-1974.
Availability: NTIS

HS-801 658

ETHANOL, OTHER CHEMICALS AND THEIR POTENTIAL COMBINATION WHICH MAY INFLUENCE AUTOMOBILE DRIVING PERFORMANCE--ALCOHOL COUNTERMEASURES LITERATURE REVIEW. FINAL REPORT

Although more data are available relative to the impact of chemical ingestion on safe motor vehicle driving, they are not precise regarding effects. Information is more precise on the effects of ethanol than on other drugs or the combination of

ethanol and other drugs. Studies continue to verify that alcohol induces impairment of driver abilities and they reaffirm the dominant role of alcohol in crashes. But, no effect has been reported which would separate alcohol from other factors to indicate whether the accident would not have occurred had ethanol not been present. Although extensive studies have been made of the effects of drugs and drug-alcohol combinations, the pharmacology may be better understood than can be practically demonstrated in the driver of a motor vehicle. There is need to formulate a consensus of opinion as to the acceptable amounts of drugs and alcohol, individually and in combination, which can be allowed in the body fluids of drivers. When this is done, legislation can be developed that can be used to control the problem.

by R. B. Forney; A. B. Richards
National Safety Council, 425 Michigan Ave., Chicago, Ill. 60611
Contract DOT-HS-4-00965
1975; 18p 40refs
Rept. covers Jul 1973-Jun 1974.
Availability: NTIS

HS-801 666

A SOLID STATE DIGITAL DATA RECORDER FOR MONITORING ANTHROPOMORPHIC DUMMY IMPACT ENVIRONMENTS. INTERIM REPORT

A solid state digital data recorder has been developed for use in monitoring anthropomorphic dummy impact environments. The recorder was designed to be a very general miniature data acquisition system and was mounted in the pelvic assembly of a 50th percentile anthropomorphic dummy. A three channel system was evaluated in a sled test series simulating a 30 mph vehicle-barrier impact. During this sled test series the dummy/recorder system successfully captured and stored impact acceleration-time histories six out of eight sled runs (the two unrecorded runs were not due to recorder failure).

by R. J. Wolf
Kaman Sciences Corp., 1500 Garden of the Gods Rd., Colorado Springs, Colo. 80907
Contract DOT-HS-4-00927
Rept. No. K-5867-3003; 1975; 103p
Availability: Reference copy only

HS-801 670

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: VERMONT

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape and audio recording equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing

techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Vermont with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 178p 2refs
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 671

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: UTAH (SALT LAKE COUNTY)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing UTAH with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-A-00938
1975 ; 199p
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 672

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: MASSACHUSETTS (BOSTON)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. Sections of legislative provisions pertaining to the

laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Massachusetts with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 73p 1ref
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 673

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: MINNESOTA (HENNEPIN COUNTY)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Minnesota with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 179p
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 674

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: LOUISIANA (NEW ORLEANS)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Louisiana with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 136p

Vol. 1 IS HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 675

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: INDIANA (INDIANAPOLIS)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the stan-

dardized field survey (used for comparing Indiana with the other 21 ASAP sites surveyed) are given

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 154p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 676

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: ARIZONA (PHOENIX)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Arizona with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 145p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 677

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: ARKANSAS (PULASKI COUNTY)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol

Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Arkansas with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 : 147p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 678

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: CALIFORNIA (LOS ANGELES COUNTY)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol or other drugs are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspensions, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing California with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 : 190p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 679

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: FLORIDA (HILLSBOROUGH COUNTY)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI

suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Florida with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 : 161p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 680

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: GEORGIA (COLUMBUS)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Georgia with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 : 134p 2refs

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 681

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: VIRGINIA (FAIRFAX COUNTY)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Virginia with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975 : 215p 1ref

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 682

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: TEXAS (SAN ANTONIO)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the stan-

dardized field survey (used for comparing Texas with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975 : 145p 1ref

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 683

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: MISSOURI (KANSAS CITY)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Missouri with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975 : 104p 2refs

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 684

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL
SITE REPORTS: NEBRASKA (LINCOLN)**

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a

BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Nebraska with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 156p trefs
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 685

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: NEW HAMPSHIRE

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape and audio recording equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing New Hampshire with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 97p tref
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 686

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: OHIO (CINCINNATI)

shown. The utilization of video tape equipment to record DWI suspects' reaction and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Ohio with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 109p
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.
Availability: Reference copy only

HS-801 687

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: OKLAHOMA (OKLAHOMA CITY)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement of officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding: the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing Oklahoma with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 129p trefs
Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801

HSL-801 688

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: SOUTH CAROLINA (RICHLAND COUNTY)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for comparing South Carolina with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975 : 159p 2refs

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HSL-801 689

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: SOUTH DAKOTA

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated. The questions and applicable responses to the standardized field survey (used for

comparing South Dakota with the other 21 ASAP sites surveyed) are given.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975 : 178p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HSL-801 690

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: MAINE (CUMBERLAND)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape and audio recording equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
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Availability: Reference copy only

HSL-801 691

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE REPORTS: MARYLAND (BALTIMORE)

Forms and documents used in connection with the processing of driving while under the influence (DWI) suspects are shown. The utilization of video tape equipment to record DWI suspects' reactions and behavior is discussed and evaluated. Sections of legislative provisions pertaining to the powers of enforcement officers, and to the operation of a vehicle while under the influence of alcohol are presented. The laws dealing with DWI situations include those regarding the implied consent to a chemical test for the purpose of determining blood alcohol content (BAC); the presumptions that can be made as a result of the test; the consequences of failure to submit to a BAC test; and the suspension, revocation, and reinstatement of driver's licenses. Physical coordination tests, pre-arrest

breath screening, and evidentiary BAC testing techniques are described. In an overview of the Alcohol Safety Action Program, police patrol strategies and deployment, DWI detection and apprehension, transporting of persons and property, incarceration, officer testimony, and adjudication are discussed and evaluated.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 143p refs

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 692

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORTS, FINAL REPORT. VOL. 2, SOBRIETY TESTING REPORT

The sobriety testing function encountered in the 22 nationwide Alcohol Safety Action Project's (ASAP) enforcement measures were surveyed. The personnel involved in the testing function, as well as the various processes of sobriety testing are described. The testing function, in the general context of ASAP enforcement, includes both physical coordination tests and the use of chemical testing devices to ascertain the blood-alcohol concentration (BAC) of the subject, as reflected in samples of such substances as blood, breath, and urine. Two principal types of breath testing equipment currently being used are evidentiary testing devices with a degree of reliability acceptable in court; and preliminary breath pre-scanning devices appropriate for roadside use. The principal objectives of this study are reflected in these three areas the application of physical coordination tests, the extent of use, the principal variations noted, and the major problems encountered; the sites which use pre-arrest breath screening, the devices used, the personnel who administer the tests, and the operational and training problems which have been acknowledged; and the major aspects of evidentiary testing, including the bodily substances analyzed, the devices which are used, the process of breath testing as it is currently practiced at the sites, and personnel and their training. Detailed information on the testing configuration at each of the 22 ASAP sites and the forms used at these sites are provided.

by F. G. Watson; M. J. Apsey; J. C. Cobb, Jr.; G. W. Loveless Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 560p refs

Vol. 1 is HS-801 636; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691. Rept. for Jun 1974-Jul 1975.

Availability: NTIS

HS-801 693

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORTS, FINAL REPORT. VOL. 3, PATROL DEPLOYMENT AND STRATEGIES

Information on patrol deployment and strategies gathered at 22 nationwide Alcohol Safety Action Programs (ASAP's) is sum-

marized. Characteristics of the 72 law enforcement agencies within these 22 ASAPs include requirements for officer applicants, starting salaries, the number of ASAP officers per agency and per site, and the equipment use. Information on the three major strategies used to achieve enforcement goals are presented, specifically, the surveillance of known driving while intoxicated (DWI) offenders, roadblocks, and the use of special ASAP enforcement teams deployed in critical time periods in areas where there is a high probability of effecting DWI arrests. Primary emphasis was placed on aspects related to patrol deployment. Topics include the use of data on alcohol-related crashes in patrol deployment, criteria for patrol sector determination, the surveillance of areas with high probability of producing DWI arrests, the degree of restriction on patrol units in choosing their patrol areas, comparisons and contrasts of daily and weekly patrol schedules and the variations in the time an officer requires to effect a DWI arrest. Pre-ASAP and current estimates of arrest times are described and compared. In general, current estimates show that the time to complete an arrest has been reduced by over an hour compared to the pre-ASAP estimates.

by F. J. Watson; M. J. Apsey; J. C. Cobb, Jr.; G. W. Loveless Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 182p refs

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691. Rept. for Jun 1974-Jul 1975.

Availability: NTIS

HS-801 694

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORTS, FINAL REPORT. VOL. 4, OVERALL ENFORCEMENT

A relatively non-technical summary of information on the overall process of driving while intoxicated (DWI) enforcement gathered from a survey of 22 Alcohol Safety Action Programs (ASAP's) is presented. Emphasis is placed on the processing procedures utilized by various sites with regard to suspect detection, apprehension, including pursuit, the stop, the arrest decision, the dispatch of an assisting officer, and legal aspects; transporting persons and property; incarceration; and testimony and adjudication. The procedures used at each of the 22 sites is presented in detail, along with the report forms used.

by F. G. Watson; M. J. Apsey; J. C. Cobb, Jr.; G. W. Loveless Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938
1975 ; 340p 1ref

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691. Rept. for Jun 1974-Jul 1975.

Availability: NTIS

HS-801 695

REVIEW AND ANALYSIS OF ASAP ENFORCEMENT EFFORT, FINAL REPORT. VOL. 5A, APPENDIX A:

**ARIZONA, ARKANSAS, CALIFORNIA, FLORIDA,
GEORGIA, INDIANA**

Legal and operational procedures pertaining to the processing of driving while intoxicated suspects and manuals for the operation of detection equipment and recording devices, such as breath analyzers and video tape recorders are presented. Demographic statistics concerning alcohol related offense arrests are selectively provided for these six states.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975; 314p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 696

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 5B. APPENDIX A:
LOUISIANA, MAINE, MARYLAND,
MASSACHUSETTS, MINNESOTA**

Legal and operational procedures pertaining to the processing of driving while intoxicated suspects and manuals for the operation of breath analyzers are presented. Arrests statistics for alcohol related traffic offenses are also selectively provided for these five states.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W., Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975; 318p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 697

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 5C. APPENDIX A:
MISSOURI, NEBRASKA, NEW HAMPSHIRE, OHIO**

Legal and operational procedures pertaining to the processing of driving while intoxicated suspects and manuals for the operation of detection and recording devices, such as breath analyzers and video tape equipment, are presented.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N.W. Suite 252, Washington, D.C. 20016
Contract DOT-HS-4-00938

1975; 351p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 698

**REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
EFFORT. FINAL REPORT. VOL. 5D. APPENDIX A:**

**OKLAHOMA, SOUTH CAROLINA, SOUTH DAKOTA,
TEXAS, UTAH, VERMONT, VIRGINIA**

Legal and operational procedures pertaining to the processing of driving while intoxicated suspects and manuals for the operation of detection and recording devices, such as breath analyzers and video tape equipment, are presented.

Planning and Human Systems, Inc., 3301 New Mexico Ave., N. W. Suite 252, Washington, D.C. 20016

Contract DOT-HS-4-00938

1975; 377p

Vol. 1 is HS-801 636; vol. 2 is HS-801 692; vol. 3 is HS-801 693; vol. 4 is HS-801 694; vol. 5 (comprised of parts A-D) is HS-801 695-698; and vol. 6 (comprised of 22 parts) is HS-801 670-691.

Availability: Reference copy only

HS-801 701

**GUIDE FOR TEACHER PREPARATION IN DRIVER
EDUCATION. DRIVING SCHOOL ED.**

A body of information and procedures that will enable operators of driving schools to develop programs capable of meeting the particular needs of their students, and capable of being administered within the resources available to them is presented. The prescription of one specific instructional program is not attempted. The characteristics of the highway transportation system, their relationship to accident causation, and the programs that exist to improve the effectiveness of the system are discussed. The components of the instructional system are dealt with: the system itself and its objectives; The professional driving instructor; curriculum development; and curriculum administration. The minimum requirements set forth by The National Highway Traffic Safety Administration for a safety-oriented program are stated. Recommended qualifications for driving instructors go far beyond those possessed by the great majority of instructors practicing today. Results of a survey of driver and safety education courses in colleges and universities are shown. Suggestions regarding the selection and organization of instructional content, the selection of instructional methods and media, lesson plan development (with sample outline), the determination of instructor requirements, selection of training devices and facilities, planning and designing range facility, and planning a simulator facility are made. Ideas about special programs such as defensive driving courses, remedial programs, rehabilitative programs, and programs for the mentally and physically handicapped are presented. A guide for instruction in some 60 driving tasks, from preventive actions to on the road situations, suggesting procedures and skills to be acquired for each task, learning problems to be anticipated, and hazards and laws, involved, is offered. Suggested instructional aids and resource materials are included.

by A. James McKnight

National Hwy. Traffic Safety Administration, Washington, D.C. 20590

Contract FH-11-7602

1975; 411p

Availability: GPO, \$5.05 as stock no. 050-003-00220-8

HS-801 738

**IMPACT TESTING OF ALLIED CHEMICAL
"INFLATABAND" WITH DUMMIES AND HUMAN**

VOLUNTEERS. VOL. 1--SUMMARY REPORT. FINAL REPORT

by J. M. Burkes; J. R. Cromack; H. Ziperman
Southwest Res. Inst., 8500 Culebra Rd., San Antonio, Tex.
78284

Contract DOT-HS-4-00933

Rept. No. SWRIP-11-4020 ; 1975 ; 23p

Rept. for 17 Feb-16 May 1975. For abstract see HS-801 739.

Availability: NTIS

HS-801 739

**IMPACT TESTING OF ALLIED CHEMICAL
"INFLATABAND" WITH DUMMIES AND HUMAN
VOLUNTEERS. VOL. 2--TECHNICAL REPORT.
FINAL REPORT**

The objectives of the testing program were: to evaluate the effectiveness and performance of the "Inflataband" restraint system as a viable method of occupant protection in a simulated head-on automotive crash; and to evaluate the kinematic performance of anthropometric dummies and human volunteers under simulated impact conditions when restrained by the "Inflataband." The program formulated to satisfy these objectives consisted of 69 dynamic sled tests (30 dummy tests and 39 human tests). Test results indicate that: the "Inflataband" provides acceptable restraint for the impact

mode utilized; and that the dummy response to impact is more exaggerated than that observed with the human volunteers, but the discrepancies diminish with increasing impact severity. Injuries to the human subjects consisted primarily of mild erythema to the face and neck; at the higher impact severities, some residual neck soreness was found. In terms of existing human tolerance criteria (head severity index-HSI, chest severity index-CSI, and head injury criterion-HIC) and observed injury, the "Inflataband" provided effective occupant restraint in simulated head-on collisions for which the total velocity change was equivalent to a 30 mph barrier collision; however, conditions were so precisely controlled that the results represent the best possible situation which in reality may rarely exist. The influence of such variables as occupant physical condition, age, size, pre-impact position, muscle tone at impact, and impact direction cannot be overemphasized. It must also be recognized that the system as tested was purely a prototype and was not without operational problems, such as metal fragments puncturing the bend. To be a production item, band modification will be required.

by J. M. Burkes; J. R. Cromack; H. Ziperman
Southwest Res. Inst., 8500 Culebra Rd., San Antonio, Tex.
78284

Contract DOT-HS-4-00933

Rept. No. SWRIP-11-4020 ; 1975 ; 230p

Rept. for 17 Feb-16 May 1975. See also Vol. 1--Summary Report (HS-801 738).

Availability: NTIS

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REVIEW AND ANALYSIS OF ASAP ENFORCEMENT
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Australian Road Res. Board, Australia

THE USE OF BEHAVIOURAL METHODS TO ASSESS TRAFFIC HAZARD

HS-017 013

Bar-Ilan Univ., Ramat-Gan, Israel

PSYCHOLOGICAL ASPECTS AND MOTOR VEHICLE ACCIDENTS

HS-017 016

British Standards Inst., 2 Park St., London W1A 2BS, England

BRITISH STANDARD: AUTOMOBILE SERIES. SPECIFICATION FOR TYRE [TIRES] AND WHEELS. PART 1. TYRES

HS-016 963

Budd Co., Technical Center, 300 Commerce Drive, Ft. Washington, Pa. 19034

FEASIBILITY STUDY OF PLASTIC AUTOMOTIVE STRUCTURE. PROGRESS REPORT, MAY 1975

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California Business and Transportation Agency, Div. of Mass Transportation

STUDENT WHEELCHAIR TRANSPORTATION. LOADING AND SECUREMENT

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California State Univ. at Los Angeles

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Calspan Corp. P.O. Box 235, 4455 Genesee St., Buffalo, N.Y. 14221

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HS-801 634

Calspan Corp., Buffalo, N.Y. 14221

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Calspan Corp., P.O. Box 235, 4455 Genesee St., Buffalo, N.Y. 14221

VEHICLE DIRECTIONAL CONTROL DURING BRAKING-IN-A-TURN. VOL. 2--TECHNICAL REPORT. FINAL REPORT

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Carleton Univ., Dept. of Mechanical and Aeronautical Engineering, Canada

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Caterpillar Tractor Co.

THE EFFECT OF CARBURIZING VARIABLES ON RESIDUAL STRESSES IN HARDENED CHROMIUM STEEL

HS-017 036

Center for the Environment and Man, Inc., 275 Windsor St., Hartford, Conn. 06120

SOCIETAL CONSEQUENCES OF TITLE 2 OF PUBLIC LAW 92-513: "MOTOR VEHICLE INFORMATION AND COST SAVINGS ACT." FINAL REPORT.

HS-801 637

Chalmers Univ. of Technology, Goteborg, Sweden

DRIVER VISUAL BEHAVIOR AND ELECTRODERMAL RESPONSE DURING HIGHWAY DRIVING

HS-017 025

Civil Aeromedical Inst., FAA

ANTHROPOMETRIC DIMENSIONS REPRESENTATIVE OF AVERAGE THREE AND SIX YEAR OLD CHILDREN SIZES FOR THE CONSTRUCTION OF MASTER-MODEL BODY FORMS. FINAL REPORT

HS-801 638

Compliance Testing, Inc., 1150 N. Freedom St., Ravenna, Ohio 44266

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Daimler-Benz A.G., Germany

DESIGN AND SPECIAL DEVELOPMENT PROBLEMS
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Deere and Co.

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Deere and Co., Materials Res., Moline, Ill.

ACCURACY OF SIMPLIFIED FATIGUE PREDICTION
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**Department of Transport, Countermeasures Dev.,
Ottawa, Canada**

COUNTERMEASURES DEVELOPMENT PROGRAMME
[PROGRAM]. MINISTRY OF TRANSPORT

HS-016 950

**Department of Transportation, Office of Consumer
Affairs, Washington, D.C. 20590**

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**Dept. of the Environment, Transport and Rd. Res. Lab.,
Crowthorne, Berks., England**

DOES KNOWING MORE ABOUT DRIVERS HELP IN
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ROAD HUMPS [SPEED BUMPS] FOR THE CONTROL
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**Dept. of Housing and Urban Dev., Federal Insurance
Administration, Washington, D.C. 20410**

FULL INSURANCE AVAILABILITY. REPORT OF THE
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**Dept. of Motor Transport, T.P. and M. Branch, 50
Rothschild Ave., Roseberry, N.S.W., 2018, Australia**

TRAFFIC SIGNAL FACILITIES FOR BLIND
PEDESTRIANS. PRELIMINARY REPORT.

HS-016 925

Deutscher Normenausschuss, Berlin 30, West Germany
DEUTSCHE NORMEN [GERMAN STANDARDS FOR
TIRES]

HS-016 962

**Dunlap and Associates, Inc., One Parkland Drive,
Darien, Conn. 06820**

DWI INSTRUCTOR TRAINING INSTITUTE: FINAL RE-
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HS-801 652

**Essex Corp., 201 North Fairfax St., Alexandria, Va.
22314**

FIELD EVALUATION OF RECTANGULAR
HEADLAMPS. FINAL REPORT

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European Tyre and Rim Technical Organisation, Ave.

Brugmann, 32, 1060 Brussels, Belgium

EUROPEAN TYRE [TIRE] AND RIM TECHNICAL OR-
GANISATION [ORGANIZATION]--DATA-BOOK 1974-
1975

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Ford Motor Co.

FATIGUE LIFE PREDICTIONS FOR A NOTCHED
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Franklin Inst., Philadelphia, Pa.

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General Motors Corp., Chevrolet Div.

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German Federal Ministry of Transport

FOR MORE SAFETY ON OUR ROADS: THE ROAD
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FEDERAL REPUBLIC OF GERMANY; "PEOPLE HAVE
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HS-016 984

**Honda Motor Co., Honda Drivg Safety Promotion
Center, Japan**

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ING EDUCATION PROGRAM FOR YOUNG MOTOR-
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Hwy. Safety Res. Inst.

ANTHROPOMETRIC DIMENSIONS REPRESENTATIVE
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HS-801 638

Impaired Drivers Proj., Alberta, Canada

THE ALBERTA IMPAIRED DRIVER'S PROJECT-
[I.D.P.]; A COUNTERMEASURE TO COPE WITH THE
DRINKING DRIVER

HS-016 952

**Indiana Univ., Inst. for Res. in Public Safety, 400 East
Seventh St., Bloomington, Ind. 47401**

TRI-LEVEL STUDY OF THE CAUSES OF TRAFFIC
ACCIDENTS: INTERIM REPORT 2 (VOL. 2: RADAR
AND ANTI-LOCK BRAKING PAYOFF ASSESSMENT).
FINAL REPORT

HS-801 631

Insurance Inst. for Hwy. Safety

A CONTROLLED STUDY OF THE EFFECT OF
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Insurance Inst. for Hwy. Safety, Washington, D.C.

BELT USE IN 1975 CARS: INITIAL DATA FROM ONE METROPOLITAN AREA

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OBSERVED RESTRAINT USE OF CHILDREN IN AUTOMOBILES

HS-016 900

Japan Automobile Manufacturers Assoc., Inc., 30 East 42nd St., New York, N.Y. 10017

MOTOR VEHICLE STATISTICS OF JAPAN, 1975

HS-016 970

Japanese Standards Assoc., 1-24, Akasaka 4, Minato-ku, Tokyo, 107 Japan

JAPANESE INDUSTRIAL STANDARD [AUTOMOBILE TIRES, VALVES, RIMS, AND TUBES]

HS-016 964

Johns Hopkins Univ., Dept. of Medical Care and Hospitals, Baltimore, Md.

HEALTH OUTCOMES FROM MOTOR VEHICLE ACCIDENTS AND THE AVAILABILITY OF HEALTH SERVICES SYSTEM RESOURCES

HS-017 003

JHK and Associates, Suite 1112, 4660 Kenmore Ave., Alexandria, Va. 22304

EVALUATION OF FIRST GENERATION UTCS/BPS CONTROL STRATEGY. VOL. 1. TECHNICAL REPORT. FINAL REPORT

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EVALUATION OF FIRST GENERATION UTCS/BPS CONTROL STRATEGY. VOL. 2. TECHNICAL APPENDICES. FINAL REPORT

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Kaman Sciences Corp., 1500 Garden of the Gods Rd., Colorado Springs, Colo. 80907

A SOLID STATE DIGITAL DATA RECORDER FOR MONITORING ANTHROPOMORPHIC DUMMY IMPACT ENVIRONMENTS. INTERIM REPORT

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Man Factors, Inc., 4433 Convoy St., San Diego, Calif. 92111

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Market Res. Group, Inc., Farmington Hills, Mich. 48024

AIR RESTRAINT SYSTEM. NATIONAL CONSUMER RESEARCH STUDY

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Marketing, and Social Marketing, London, England

SOCIAL MARKETING AND DRIVER BEHAVIOUR [BEHAVIOR]

HS-017 023

Massachusetts Inst. of Tech., Operations Res. Center, Cambridge, Mass. 02139

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ANALYZING THE PROCESS OF SCREENING CALLS FOR EMERGENCY SERVICE

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APPROXIMATING THE PERFORMANCE OF URBAN EMERGENCY SERVICE SYSTEMS. REV. ED.

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McGill Univ., Dept. of Epidemiology and Health, Canada

PROSPECTIVE STUDIES OF TRAFFIC INJURIES IN RELATION TO MEDICAL CONDITIONS OF DRIVERS. METHODOLOGY AND PROGRESS REPORT

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Mechanical Engineering Lab., Japan

COURSE FOLLOWING [TRACKING] OF MAN-AUTOMOBILE SYSTEM

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Medical Res. Council, Applied Psychology Unit, Cambridge, England

DRIVERS' ATTITUDES TO THE SERIOUSNESS OF ROAD TRAFFIC OFFENCES CONSIDERED IN RELATION TO THE DESIGN OF SANCTIONS

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Michigan Dept. of State Hwys. and Transportation

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A TRAFFIC ACCIDENT ANALYSIS OF HIGH ACCIDENT LOCATIONS IN THE CITY OF MARQUETTE

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Michigan Dept. of State Hwys. and Transportation,

Traffic and Safety Div., Lansing, Mich.

ANALYSIS OF GUARDRAIL ACCIDENTS IN MICHIGAN

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Minicars, Inc., 35 La Patera Lane, Goleta, Calif. 93017

SUBCOMPACT CAR CRASHWORTHINESS PROGRAM. PROGRESS REPORT, MAY 1975

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TEST REPORT FOR NHTSA-5-2191 [HYBRID 2 DUMMIES]

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Ministry of Transport, Road and Motor Vehicle Traffic Safety, Ottawa, Canada

PREDICTING INTERSECTION ACCIDENTS

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Ministry of Transport, Traffic Res. Section Private Bag, Wellington, New Zealand

SHORT-TERM TRAFFIC "BLITZES"

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Ministry of Transport, Traffic Res. Section Wellington, N. Z.

COMPULSORY SAFETY HELMET LEGISLATION AND MOTOR CYCLIST ACCIDENTS

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Ministry of Transport, Traffic Res. Section, Private Bag, Wellington, N. Z.

ATTITUDES TOWARD DRINKING AND DRIVING IN NEW ZEALAND

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- MOTOR CYCLE HELMET AND HEADLAMP CHECKS**
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- National Bureau of Standards, Washington, D.C. 20234**
CRUSH CHARACTERISTICS OF AUTOMOBILE
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HS-801 640
- National Com. on Uniform Traffic Laws and Ordinances**
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HS-801 645
- National Com. on Uniform Traffic Laws and Ordinances,**
1776 Massachusetts Ave., N.W., Washington, D.C. 20036
DRIVER LICENSING LAWS ANNOTATED. 1973 ED.
HS-016 983
- National Hwy. Traffic Safety Administration, Office of
Statistics and Analysis**
A STATISTICAL RELATION BETWEEN CAR WEIGHT
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HS-801 629
- National Hwy. Traffic Safety Administration,**
Washington, D.C. 20590
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- National Hwy. Traffic Safety Administration,**
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- National Hwy. Traffic Safety Administration,**
Washington, D.C. 20590
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HS-801 701
- National Inst. for Rd. Res., Council for Scientific and
Industrial Res.**
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- National Safety Council, 425 Michigan Ave., Chicago,
Ill. 60611**
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- National Safety Council, 425 N. Michigan Ave., Chicago,
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- Nissan Motor Co., Ltd., Central Engineering Labs. Div.,
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- Nova Scotia Commission on Drug Dependency, Halifax,
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- Ohio Dept. of Transportation, Mercury Vapor Sign
Lighting Com., 25 South Front St., Columbus, Ohio
43215**
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- Ohio State Univ., Center for Vocational Education, 1960
Kenny Rd., Columbus, Ohio 43210**
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- Ohio Univ. Dept. of Industrial and Systems Engineering,
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- Peat, Marwick, Mitchell and Co., 1025 Connecticut Ave.,
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- Peat, Marwick, Mitchell and Co., 1025 Connecticut Ave.,
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- Planning and Human Systems, Inc., 3301 New Mexico
Ave., N.W., Suite 252, Washington, D.C. 20016**
METHODS EMPLOYED BY ASAP ENFORCEMENT
COUNTERMEASURES TO RECORD THE BEHAVIOR
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Ave., N.W., Suite 252, Washington, D.C. 20016**

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**Planning and Human Systems, Inc., 3301 New Mexico
Ave., N.W., Suite 252, Washington, D.C. 20016**

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**Planning and Human Systems, Inc., 3301 New Mexico
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EFFORT. FINAL REPORT. VOL. 6. INDIVIDUAL SITE
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Psychological Inst. for Children, Stockholm, Sweden
PREVENTION OF ROAD ACCIDENTS TO CHILDREN,
PEOPLE OF OLD AGE AND THE HANDICAPPED
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HS-016 999

Queen's Univ., Dept. of Psychology, Kingston, Ont., Canada

THE EFFECTS OF DIFFERENT [MASS COMMUNICA-
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Queen's Univ., Kingston., Ont., Canada

THE EFFECT OF DRUGS ON THE LEARNED
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HS-016 946

Safety Management Inst.

VISUAL PERFORMANCE STANDARDS FOR DRIVER
LICENSING. PROJECT DESIGN

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Saint Sacrement Hosp., Orthopaedic Service, Quebec, P.Q., Canada

TROCHANTERIC FRACTURES

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Scandinavian Tire and Rim Organization, Box 4179, 203 13 Malmo 4, Sweden

(SCANDINAVIAN TIRE STANDARDS)

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Shibaura Inst. of Tech., Dept. of Engineering

SIMULATOR APPLICATIONS TO DETERMINE EF-
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HS-017 021

South Texas Tire Test Fleet, Inc., Drawer J, Devine, Texas

UNIFORM TIRE QUALITY GRADING--TREADWEAR.
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HS-801 611

Southwest Res. Inst., San Antonio, Tex. 78284

RELATIONSHIP BETWEEN WHOLE-BODY VIBRA-
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HS-016 986

Southwest Res. Inst., 8500 Culebra Rd., San Antonio, Tex. 78284

IMPACT TESTING OF ALLIED CHEMICAL
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"INFLATABAND" WITH DUMMIES AND HUMAN
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Stanford Univ.

PREDICTIONS OF CUMULATIVE FATIGUE DAMAGE
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Systems Technology, Inc., Hawthorne, Calif.

DRIVER/VEHICLE RESPONSE AND PERFORMANCE
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SSTAR, Inc.

EVALUATION AND DEVELOPMENT OF DRIVER
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Texas A&M Univ., Texas Transportation Inst., College Station, Tex.

RAINFALL AND VISIBILITY--THE VIEW FROM BE-
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The Steel Co. of Canada, Ltd., R and D Dept.

EFFECT OF BALANCED BIAXIAL STRETCHING ON
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HS-017 035

The Traffic Safety Res. Group, Dept. of Psychology, Univ. of Uppsala, Sweden

OVERTAKING PERFORMANCE UNDER CON-
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Transport and Rd. Res. Lab., Crowthorne, England

THE PERCEPTUAL PROBLEMS OF THE DRIVER
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HS-017 012

Transport and Rd. Res. Lab., Rd. User Characteristics Div., Crowthorne, Berks., England

DRIVER BEHAVIOR--NEWLY QUALIFIED DRIVERS

HS-017 002

Transport and Road Res. Lab., Dept. of the Environment, Crowthorne, Berks., England

OVERTAKING BEHAVIOUR [BEHAVIOR] UNDER
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Transportation Res. Board, Com. on Traffic Records,

2101 Constitution Ave., NW, Washington, D.C. 20418
TRAFFIC RECORDS WORKSHOP, DECKERS,
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Transportation Systems Center, Kendall Square, Cambridge, Mass. 02142

FIELD EVALUATION OF LOCOMOTIVE CONSPICU-
ITY LIGHTS. FINAL REPORT

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TRW Inc.

SULFIDATION CORROSION OF NICKEL-BASE EX-
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HS-017 032

Ultrasystems, Inc., Dynamic Science Div., 1850 West Pinnacle Peak Rd., Phoenix, Ariz. 85027

SCHOOL BUS SAFETY IMPROVEMENT PROGRAM.
SUMMARY REPORT

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- Univ. of Goeteborg, Sweden
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